STIC-Biotech/ChemLib

158220

From:

Mertz, Prema

Sent:

Tuesday, July 05, 2005 2:37 PM STIC-Biotech/ChemLib

To: Subject:

10/750,797

Please search SEQ ID NO:1-2 with protein databases.

Thanks.

Prema Mertz, Ph.D.
Primary Examiner
Art Unit 1646
4D81 Remsen Bldg Mailbox 4C70
US Patent & Trademark Office
Tel # (571) 272-0876
FAX # (571) 273-0876

WIR

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Searcher:
Searcher Phone: 2-
Date Searcher Picked up:
Date Completed:
Searcher Prep/Rev. Time:
Online Time:

Type of Search

NA#:____ AA#:___
Interference:___ SPDI:_

Interference: SPDI: S/L: Oligomer: Encode/Transl: Text: Text:

Inventor:____ Litigation:___

endors and cost where applicable
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QUESTEL/ORBIT:
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SEQUENCE SYSTEM:
WWW/Internet:
Other(Specify):

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Copyright (c) 1993 - 2005 Compugen Ltd
Q9GJU0
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Rieder M.
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MEDLINE-86220137; PubMed-2423327;
Nagata S., Teuchlya M., Asano S., Ya
Oheda M., Nomura H., Yamazaki T.;
"The chromosomal gene structure and
colony-stimulating factor.";
EMBO J. 5:575-581(1986)
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ProDom; PD004356; Interleukin_6;
SMART; SM00126; IL6; 1.
PROSITE; PS00254; INTERLEUKIN_6;
      SEQUENCE OF 19-207
MEDLINE=86151684; I
Souza L.M., Boone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "Molecular cloning and expression colony-stimulating factor."; Nature 319:415-418(1986).
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Mammalia; Eutheria;
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P09919;
                                                                              "SeattleSNPB. NHLBI I
FHCRC, Seattle, WA (
Submitted (JUN-2001)
                                                                                                                                                                                                                                                                                                     MEDLINE=87196936; Pu
Devlin J.J., Devlin
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Carrington D.P., Chung M.-W.
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; Pubmed=2420009;
5 T.C., Gabril-
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., Nomura H., Ono M.;
sion of cDNA for huma
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                                                                                    ogram for genomic applications, //pga.gs.washington.edu)."; BL/GenBank/DDBJ databases.
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            P.H.,
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EMBL; EMBL;

M13008; X03656; X03655; X03438;

CAA27168.1; AAA03056.1; CAA27291.1; CAA27290.1;

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This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the Entrepean Bioinformatics Institute. There are no restructe by non-profit institutions as long as its content modified and this statement is not removed. Usage by and
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Hill C.P., Osslund T.D., Eisenberg D.;
"The structure of granulocyte-colony-stimulating
relationship to other growth factors.";
Proc. Natl. Acad. Sci. U.S.A. 90:5167-5171(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Zink T., Ross A., Luers K., Cieslar C., Rudolph R., Holak T.A.; "Structure and dynamics of the human granulocyte colony-stimulating factor determined by NMR spectroscopy. Loop mobility in a four-hellipundle protein.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE=93106200; PubMed=1281794; DOI=10.1016/0014-5793(92)81521-M; Zink T., Ross A., Ambrosius D., Rudolph R., Holak T.A.; "Secondary structure of human granulocyte colony-stimulating factor derived from NMR spectroscopy."; PEBS Lett. 314:435-439(1992).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRUCTURE BY NMR. MEDLINE=93106200;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   recombinant human granulocyte colony-stimulating oduced in Chinese hamster ovary cells."; Chromatogr. A 637:55-62(1993).
                                                                                                                                                                                                                              (Amgen/Roche) and Granocyte (Rhone-Poulenc). Used neutropenia (a disorder characterized by an extrem of neutrophils in blood).

SIMILARITY: Belongs to the IL-6 superfamily.
CAUTION: Ref. 4 misquotes the gene name as "CSF1".
DATABASE: NAME-Neupogen/Granulokine;
NOTE-Clinical information on Neupogen/Granulokine;
                                                                                                                                                                                                                                                                                                                                                 PTM: O-glycan consists of Gal-GalNac disaccharide with up to two sialic acid residues (done recombinantly expressed G-CSF from CHO cells).
PHARMACEUTICAL: Available under the names Neupogen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SUBUNIT: Monomer.
SUBCELLULAR LOCATION:
ALTERNATIVE PRODUCTS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Event=Alternative
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IM: O-glycan consists of Gal-GalNAc disaccharide which
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PROSITE; PS00254; INTERLEUKIN_6; 1.
3D-structure; Alternative splicing;
Growth factor; Pharmaceutical; Polym
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ProDom; PD008388; GCSF_MGF; 1.
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PDB; IPGR; X-ray; A/C/E/G=30-207
PDB; 1RHG; X-ray; A/B/C=31-207.
Genew; HGNC:2438; CSF3.
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InterPro; IPR003629; GCSF_MGF.
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EMBL; M17706; AP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GO:0005615; C:extracellular space; TAS.
GO:0005130; F:granulocyte colony-stimulating factor recep.
GO:0007275; p:development; TAS.
GO:0008284; P:positive regulation of cell proliferation; TAS.
                                                                                                                                                                                              174;
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A25093; FQHUGL.
1CD9; X-ray; A/C=30-207.
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                                                                                                                                 WAPLSSCPSQALQLAGCLSQLHSGLFLYQGLLQALEGISPELGFTLDTLQLDVADFATTI
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98.3%;
Last sequence update)
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                                                                                                                                                                                                    Score 884.5; DB 1;
Pred. No. 6.1e-73;
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/FTId=VSP 002673.
L -> M (in dbsNP:2227329).
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                                           PRT;
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A -> T (in dbSNP:2227330)
/FTId=VAR_013074.
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precursor
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Best Local
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DISULFID
DISULFID
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NON_TER
SIGNAL
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InterPro; IRR009079; 4 helix cytokine.
InterPro; IRR00329; GCSF MGF.
InterPro; IPR003573; IL6 MGF GCSF.
InterPro; IPR003574; Interleukin_6.
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PRINTS; PR00434; INTERLEUKIN6.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           use by non-profit institutions as long modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                +++
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Felis silvestris catus (Cat).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata,
Mammalia, Eutheria, Carnivora, Fissipedia, Felidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        InterPro; IPR003574; Pfam; PF00489; IL6; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  the European Bioinformatics Institute. Thuse by non-profit institutions as long
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        feline granulocyte colony-stimulating Cytokine 14:347-351(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRAIN=European shorthair; TISSUE=Lung;
MEDLINE=21389237; PubMed=11497496; DOI=10.1006/cyto.2001.0910;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=9685;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "Isolation, nucleotide sequence and expression of a feline granulocyte colony-stimulating factor.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Dunham S.P.,
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SUBCELLULAR LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FUNCTION: Granulocyte/macrophage colony-stimulating factors at cytokines that act in hematopoiesis by controlling the product differentiation, and function of 2 related white cell population the blood, the granulocytes and the monocytes-macrophages.
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                                                                                                                     MEDVGMAPAVEPTQGTMPTFTSAFQRRAGGTLVASNLQSFLEVAYRALRHFTKP
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Granulocyte colony-stimulating
By similarity.
By similarity.
O-linked (GalNAc. . .) (By simi
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Pred. No. 4.2e-60;
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    (By similarity).

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Matches 141
                                                                                         Ovis aries (Sheep).
Eukaryota; Metazoa; (
Mammalia; Eutheria; (
Caprinae; Ovis.
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Q28746;
30-MAY-2000
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SIGNAL
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Name=CSF3;
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SMART; SM00126; IL6; 1.
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Carnivora; Fissipedia; Felidae;
SEQUENCE FROM N.A.
MEDLINE=95102116; PubMed=7528579;
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PRINTS; PR00434; INTERLEUKIN6.
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05-JUL-2004
                                                              NCBI_TaxID=9940;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Tsujimoto H., Hasegawa A., Ueda
"Molecular cloning and expression
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NCBI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Name=G-CSF;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pfam; PF00489; IL6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Yamamoto A., Iwata A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          nterPro; IPR003574;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  interPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           InterPro;
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GO:0006955;
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GO:0005125; F:cytokine activity: IEA.
GO:0005138; F:interleukin-6 receptor
GO:0006955; P:immune response; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TaxID=9685;
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IPR003629; GCSF MGF C
IPR003573; IL6 MGF C
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                                                                                                                                                                                              colony-stimulating
                                                                                                                                                                                                                  (Rel. 39, Created)
(Rel. 39, Last seq
(Rel. 44, Last ann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
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(TrEMBLrel. 16, Last sequence update)
(TrEMBLrel. 27, Last annotation update)
colony-stimulating factor precursor.
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                                                                                                             Chordata; Craniata; Vertebra
Cetartiodactyla; Ruminantia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              83.0%;
81.0%;
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expression of the
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MW;
                                                                                                                                                                                                                     sequence up
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 744; Db 2; ...
Pred. No. 4.2e-60;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Potential
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Katsumata A., Oishi K., Saito T.,
                                                                                                                                                                                                                                         update)
                                                                                                                                                                                                                                                                                                        174
                                                                                                                                                                                              update)
(G-CSF)
                                                                                                                                  Vertebrata; Eutel
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                                                                                                             leostomi;
Bovidae;
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Granulocyte Name=CSF3;

colony-stimulating

01-JUN-1994 25-OCT-2004

29, 45,

Last sequence up Last annotation imulating factor

update)

update) (G-CSF)

(Rel. (Rel.

Created)

Canis familiaris (Dog). Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Carnivora;

Craniata; Vertebrata; ; Fissipedia; Canidae;

Euteleostomi; Canis.

MEDLINE=94076341; Lovejoy B., Cascio

Cascio

Ū.,

Eisenberg

K-RAY CRYSTALLOGRAPHY (2.2 ANGSTR MEDLINE=94076341; PubMed=7504736;

ANGSTROMS)

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RESULT 6
CSF3 CAMPA
ID CSF3 C
AC P35834
DT 01-JUN
DT 025-OCT
DE Granul
GN Name=C
OS CAN18
OC Mammal
OX NCBL T
RN [1]
RN X-RAY
RA Lovejo
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Matches
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Best Local
                                                                                                                                                                   P35834;
01-JUN-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PROSITE; PS00254; INTERLEUKIN 6; 1. Cytokine; Glycoprotein; Growth fact DISULFID 36 74 By sin CARBOHYD 133 133 O-link
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       use by non-profit institute. There are no restrictions modified and this statement is not removed. Usage hy and fine entities requires a license acrossor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DNA Seq. 4:339-342(1994).

-!- FUNCTION: Granulocyte/macrophage colony-stimulating factors are cytokines that act in hematopoiesis by controlling the production, differentiation, and function of 2 related white cell populations of the blood, the granulocytes and the monocytes-macrophages. This CSF induces granulocytes (By similarity).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the Entropean Bioinformatics Institute. There are no restitute the European Bioinformatics Institute.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SMART; SM00126; IL6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pfam; PF00489; IL6; 1.
PRINTS; PR00433; IL6GCSFMGF.
ProDom; PD008388; GCSF_MGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 InterPro; IPR009079; 4 helix cytokine.
InterPro; IPR003629; GCSF MGF.
InterPro; IPR003573; IL6 MGF GCSF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL; L07939; AAA68006.1; --.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "Cloning and s
factor cDNA.";
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PTM: O-glycosylated (By similarity).
SIMILARITY: Belongs to the IL-6 superfamily.
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133
174 AA;
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                                                                                                                                                                                               STANDARD;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             By similarity.
By similarity.
O-linked (GalNAc. . .) (B
ASAA8F8D23ACD1E CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 738; DB 1;
Pred. No. 1.3e-59;
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RESULT
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CSF3_BOVIN STANDARD
P35833; Q9TV89;
01-JUN-1994 (Rel. 29, C
16-OCT-2001 (Rel. 40, L
25-OCT-2004 (Rel. 45, L
                                          Name=CSF3; Synonyme=GCSF;
Bos taurus (Bovine).
Eukaryota; Metazoa; Chord
Mammalia; Eutheria; Cetar
                                                                                                                             16-OCT-2001 (Rel. 40, Last sequence update)
25-OCT-2004 (Rel. 45, Last annotation updat
Granulocyte colony-stimulating factor precu
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SEQUENCE
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InterPro; IPR003629; GCSF_MGF
InterPro; IPR003573; IL6_MGF_GCSF
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J. Mol. Biol.
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SUBCELLULAR LOCATION: Secreted.
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    _TaxID=9913;
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1BGE; X-ray; A/B=1-175.
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differentiation, ar
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SSCPSQALQLAGCLSQLHSGLFLYQGLLQALEGISPELGFTLDTLQLDVADFATTIWQQM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PLGPASSLPQSFLLKCLEQVRKIQGDGAALQEKLCATYKLCHPEELVLLGHSLGIPWAPL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PD008388;
                                                                                                                                                                                                                                                                                                                                            EDLGMAPAVPPTQGTMPAFTSAFQRRAGGVLVASNLQSFLELAYRALRHFAKP
                                                                                                                                                                                                                                                                                                                                                                                                                                   SSCSSQALQLMGCLRQLHSGLFLYQGLLQALAGISPELAPTLDTLQLDTTDFAINIWQQM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PLGPTGPLPQSFLLKCLEQMRKVQADGTALQETLCATHQLCHPEELVLLGHALGIPQPPL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PS00254;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        O-glycosylated.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           structure of canine and bovine granulocyte-colony stimulating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Cytokine; Glycoprotein; Growth factor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Α,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   234:640-653(1993)
                                                                                                                                                                                                                                         STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INTERLEUKIN_6; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCSF_MGF; 1.
                                            Cetartiodactyla;
                                                                   Chordata; Craniata; Vertebrata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   55
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  81.9%;
                                                                                                                                                                                                 Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 734;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred. No. 3.10
L; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                O-linked (GalNAc.
                                                                                                                                                                                                                                         PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   28C26B24990C6DB3 CRC64;
                                               Ruminantia; Pecora;
                                                                                                                                                                                                                                         195
                                                                                                                                                    update)
                                                                                                                               precursor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3.1e-59;
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                                                                                                                                  (G-CSF).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                   Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (By similarity)
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LSSCPSQALQLAGCLSQLHSGLFLYQGLLQALEGISPELGPTLDTLQLDVADFATTIWQQ 120 TPLGPARSLPQSFLLKCLEQVRKIQADGAELQERLCAAHKLCHPEELMLLRHSLGIPQAP

60 81

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Query Match
Best Local S
Matches 141
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factor (G-CSF).";

J. Mol. Biol. 234:640-653(1993).

-!- FUNCTION: Granulocyte/macrophage colony-stimulating.....

cytokines that act in hematopolesis by controlling the products differentiation, and function of 2 related white cell population of the differentiation, and function of the monocytes-macrophages.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           [1]
SEQUENCE FROM N.F.
STRAIN=Holstein;
                                                                                                                                                                                                                                                                   CHAIN
DISULFID
DISULFID
CARBOHYD
CONFLICT
                                                                                           HELIX
TURN
                                                                                                                                  TURN
                                                                                                                                                           TURN
HELIX
                                                                                                                                                                                                 HELIX
TURN
                                                                                                                                                                                                                             TURN
                                                                                                                                                                                                                                           HELIX
                                                                             SEQUENCE
                                                                                                                                                  TURN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              entities requires a license agreement (S or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "Cloning, sequencing, and analysis of CDNA encouring DOV. colony stimulating factor.";
Submitted (SEP-1998) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                            SMART; SM00126; IL6;
                                                                                                                                                                                                                                                                                                                                                                                                                                InterPro; IPR009079; 4 helix cytokine.
InterPro; IPR003629; GCSF MGF.
InterPro; IPR003573; IL6 MGF GCSF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        the European Bioinformatics Institute. There are no restrictions use by non-profit institutions as long as its content is in modified and this statement is not removed. Usage by and for con
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Heidari M., Kehrli M.B. Jr.;
"Cloning, sequencing, and analysis of cDNA encoding bovine granulocyte
                                                                                                                                                                                                                                                                                                                                       SIGNAL
                                                                                                                                                                                                                                                                                                                                                                PROSITE; PS00254;
                                                                                                                                                                                                                                                                                                                                                                                         ProDom; PD008388; GCSF_MGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                        PRINTS;
                                                                                                                                                                                                                                                                                                                                                                                                                      Pfam; PF00489; IL6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PDB; 1BGC; X-ray; @=22-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL; AF092533; AAD16102.1; -.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                X-RAY CRYSTALLOGRAPHY (1.7 ANGSTROMS).
                                                                                                                                                                                                                                                                                                                                                   D-structure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    covejoy B., Cascio D., Eisenberg D.;
Crystal structure of canine and bovine granulocyte-colony stimulating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SIMILARITY: Belongs to the IL-6 superfamily.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PTM: O-glycosylated.
                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                       PR00433; IL6GCSFMGF.
TPLGPASSLPQSFLLKCLEQVRKIQGDGAALQEKLCATYKLCHPEBLVLLGHSLGIPWAP
                                                                             195 AA;
                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N.A
                                                                                                                                                                                                                                                                                                                                                  Cytokine;
                                                                                                                                                                                                                                                                                                                                                              INTERLEUKIN_6; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PubMed=7504736;
                                                                                                        112
115
120
145
191
                                                                             21431 MW;
                                      81.1%;
81.0%;
                                                                                                                                                                                                                                                                                                                Glycoprotein; Growth tactor; Signal.
Potential.
Granulocyte colony-stimulating factor.
                         ; Score 727; DB 1;
; Pred. No. 1.5e-58;
11; Mismatches 22;
                                                                                                                                                                                                                                                                   O-linked
TS -> RG
                                                                             8C06119E4ADFBA73 CRC64;
                                                                                                                                                                                                                                                                   (GalNAc. (in Ref.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (See http://www.isb-sib.ch/announce,
                                                                                                                                                                                                                                                                   ۵)
. .
                                                   Length 195
                          Indels
                                                                                                                                                                                                                                                                               (By similarity)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ne production, populations ophages. This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             a collaboration
                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  outstation
                          Gaps
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RESULT 8
CSP3 LPT 6
CSP3 AC CSP4 AC CS
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Query Match
Best Local Similarity
                                                                                            DISULFID
CARBOHYD
CONFLICT
                                                                                                                                                                                                                                                   PRINTS; PR00433; IL6GCSFMGF: 1.
ProDom; PD008388; GCSF_MGF: 1.
SMARF; SM00126; IL6; 1.
PROSITE; P800254; INTERLEUKIN_
                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL; Y10494; CAA71518.1; -.
EMBL; U68482; AAB70701.1; -.
EMBL; U68481; AAB70700.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EM the European Bioinformatics Institute. There are no restruse by non-profit institutions as long as its content modified and this statement is not removed. Usage by and entities requires a license agreement (See http://www.isb-sor send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gloster S.E., Sandeman R.M. "Cloning of a cDNA and gene stimulating factor.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       30-MAY-2000 (Rel. 39, Last sequence update)
05-JUL-2004 (Rel. 44, Last annotation update)
Granulocyte colony-stimulating factor precursor
                                                                      SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -!- PTM: O-glycosylated (By similarity).-!- SIMILARITY: Belongs to the IL-6 superfamily.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    002837;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CSF3
                                                                                                                                                              DISULFID
                                                                                                                                                                                                          SIGNAL
                                                                                                                                                                                                                                Cytokine;
                                                                                                                                                                                                                                                                                                                                                                                                                                               HSSP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Submitted (SEP-1997) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Submitted (JAN-1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Kulmburg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sus scrofa (Pig).
                                                                                                                                                                                                                                                                                                                                                               InterPro; IPR009079; 4 helix cytokine
InterPro; IPR003629; GCSF MGF.
InterPro; IPR003573; IL6 MGF GCSF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FISSUE=Liver;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=9823;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Name=CSF3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           30-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SUBUNIT: MONOMER.
SUBCELLULAR LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            differentiation, and function of 2 related white cell population of the blood, the granulocytes and the monocytes-macrophages CSF induces granulocytes (By similarity).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     nitted (SEP-1997) to the second production, stimulating factors are FUNCTION: Granulocyte/macrophage colony-stimulating the production, cytokines that act in hematopolesis by controlling the production, cytokines that act in hematopolesis by controlling the productions of 2 related white cell populations
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PIG
                                                                                                                                                                                                                                                                                                                                                     PF00489; IL6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  142
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                                                                                                                                                                                                                                                                                                                                                                                                                                               P09919;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           019180;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEELGMAPALQPTQGAMPAFASAFQRRAGGVLVASHLQSFLEVSYRVLRHLAQP 174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLGAAPAVQPTQGAMPTFTSAFQRRAGGVLVASQLHRFLELAYRGLRYLAEP 195
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57
85
154
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                                                                                                                                                                                                                             INTERLEUKIN 6; 1.
otein; Growth factor; Signal.
                                                                                                                195
195
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                                                                      21214
78.3%;
79.2%;
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                                                                                                             Potential.

Granulocyte colony-stimulating
By similarity.
By similarity.
O-linked (GalNAc...) (By simi
Score 702; DB 1;
Pred. No. 3e-56;
                                                                                            ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRT;
                                                                      84787F20DB0AEA1C
                                                                                            ed (GalNAc.
(in Ref. 1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             granulocyte-colony
                        Length
                                                                         CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (G-CSF)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          restrictions
                          195;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           and
                                                                                                                     similarity)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL
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                                                                                                                                                                                         factor
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RESULT 9
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-MAR-1989 (Rel. 10, Last sequence update) 05-JUL-2004 (Rel. 44, Last annotation update) Granulocyte colony-stimulating factor precursor Name=Csf3; Synonyms=Csf5; Mars musculus (Mouse).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CSF3_MOUSE
P09920;
                                                                                                                                                              the European Bioinformatics Institute. The use by non-profit institutions as permedified and this statement is not removed. entitles requires a license agreement (See or send an email to license@isb-sib.ch).
                                                                                         EMBL; M13926; AAA37672.1;
EMBL; X05402; CAA28986.1;
                                                                                                                                                                                                                                                                                         This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HIOI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "Structural studies
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       stimulating factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE=87190474; PubMed=3494605;
Tsuchiya M., Kaziro Y., Nagata S.;
"The chromosomal gene structure fo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          colony-stimulating factor."
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"Isolation and characterization of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-MAR-1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PubMed=3501294;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PARTIAL SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE=87017003; PubMed=3489940;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                              PTM: O-glycosylated (By similarity). SIMILARITY: Belongs to the IL-6 superfamily.
                                                                                                                                                                                                                                                                                                                                                                                                              SUBCELLULAR LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                          SUBUNIT: Monomer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FUNCTION: Granulocyte/macrophage colony-stimulating factors are cytokines that act in hematopoiesis by controlling the production differentiation, and function of 2 related white cell populations
                                                                                                                                                                                                                                                                                                                                                                                                                                                          CSF induces granulocytes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      of the blood,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                J. Biochem.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Chem. Hoppe-Seyler 368:1327-1331(1987).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Nice E.C.,
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he murine granulocyte colony-stimulating
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRT;
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f the cDNA for murine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        and
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                                                                                                                                                                                                  There are no read the state of the state of the content are by an indicate the state of the stat
                                                                                                                                                                                             oved. Usage by and for commercial (See http://www.isb-sib.ch/announce/
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HSSP;

P09919;

1RHG

PIR; A29536; A26496.

ชื่อ

MGI:1339751; Csf3. rPro; IPR009079; 4_helix_cytokine.

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Query Match
Best Local Similarity
Matches 127; Conserv
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Best Local :
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                                                                                                                                                                                                                                                                                                                                                                       P97712;
P97712;
01-MAY-1997
01-MAY-1997
01-MAR-2004
                                           PRINTS; PR00433; ILGGCSFMGF.

ProDom; PD008388; GCSF MGF; 1.

SMART; SM00126; ILG; 1.

PROSITE; PS00254; INTERLEUKIN 6; 1.

SEQUENCE 214 AA; 23659 MW; 29BB88B17B684C55 CRC64;
                                                                                                                                                   Granulocyte colony stimulating
Rattus norvegicus (Rat).
Eukaryota, Metazoa, Chordata, C
Mammalia; Eutheria; Rodentia; S
                                                                                                    InterPro; IPR009079; 4 helix cytokine.
InterPro; IPR003629; GCSF MGF.
InterPro; IPR003573; IL6_MGF_GCSF.
Pfam; PF00489; IL6; 1.
                                                                                                                                                                                                         Gene 175:101-104(1996).
EMBL; U37101; AAC52915.1; -.
PIR; JC5043; JC5043.
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CARBOHYD
                                                                                                                                                                                                                                            stimula
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Signal.
SIGNAL
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                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                              NCBI_TaxID=10116;
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InterPro; IPR003573; IL6_MGF_GCSF.
Pfam; PF00489; IL6; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CHAIN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRINTS; PR00433; IL6GCSFMGF.
ProDom; PD008388; GCSF_MGF; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                          10
                                                                                                                                            p; 05043; JC5043.

P; P09919; 1RHG.
G0:0005576; C:extracellular; IEA.
G0:000515; F:cytokine activity; IEA.
G0:0008083; F:growth factor activity;
G0:0006985; P:immune response; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              159
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(TrEMBLrel. 03, Last sequence update)
(TrEMBLrel. 26, Last annotation update)
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73.8%;
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Pred. No. 1.2e-
9; Mismatches
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Score 634; DB 2;
Pred. No. 5.6e-50;
0; Mismatches 35
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By similarity.
O-linked (GalNAc. . .) (By simi
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                     Length 214;
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SEPPPRE

01-JAN-1990 (Rel. 13, Created)
01-JAN-1990 (Rel. 13, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation updat
Myelomonocytic growth factor precursor (MGF
Gallus gallus (Chicken).

update)

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STANDARD;

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RESULT 11
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P13854;
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01-OCT-2002
01-OCT-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Noronha L.E., Takafuji V.A.,
Submitted (APR-2002) to the E
EMBL; AP503365; AAM34205.1; -
HSSP; P35833; 1BGC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Equus caballus (Horse).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Perissodactyla; Equidae; Equus.
                                                                                                                                                                                                                                                                                                                                PRINTS; PR00433; IL6GCSFMGF.
ProDom; PD008388; GCSF_MGF; 1.
SMART; SM00126; IL6; 1.
                                                                                                                                                                                                                                                                                                                                                                    InterPro; IPR009079; 4 helix cytokine.
InterPro; IPR003629; GCSF MGF.
InterPro; IPR003573; IL6 MGF GCSF.
Pfam; PF00489; IL6; 1.
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01-OCT-2002 (TrEMBLrel. 22, Las
01-MAR-2004 (TrEMBLrel. 26, Las
01-MAR-2004 (TrEMBLrel. 26)
                                                                                                                                                                                                                                                                                                                                                                                                                                    GO; GO:0005576; C:extracellular; IEA.
GO; GO:0005125; F:cytokine activity; IEA.
GO; GO:0008083; F:growth factor activity;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Name=G-CSF;
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                                                                                                                                                                                                                                                                                                                     PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                           GO; GO:0006955; P:immune response;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=9796;
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                                                                                                                                                                                                                                                                                                     PS00254; INTERLEUKIN_6; 1.
127 AA; 13657 MW; 25559C2569802077 CRC64;
                                                                                                  LRYLAEP
                                                                                                                         LRHLAOP
                                                                                                                                                                          LDVADFATTIWQQMEELGMAPALQPTQGAMPAFASAFQRRAGGVLVASHLQSFLEVSYRV 167
                                                                                                                                                    LDVTDFATNIWQQMEDLGVAPVVQPTHGPMPTFASAFQRRAGGVLVASNLQRFLELAYRG
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                                                                                                                                                                                                                                                       Conservative
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                                                                                                 127
                                                                                                                         174
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79.5%;
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Pred. No. 5.9e-39;
^ Migmatches 17;
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Last annotation update)
ing factor.
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EMBL/GenBank/DDBJ databases.
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Matches
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CARBOHYD
SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL; M85034; AAA48694.1;
EMBL; X14477; CAA32639.1;
PIR; A42247; A42247
HSSP; P09919; 1RHG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sterneck B., Blattner C., Graf T., Leutz A.; "Structure of the chicken myelomonocytic growth factor gene specific activation of its promoter in avian myelomonocytic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE=89231616; PubMed=2785450;

Leutz A., Damm K., Sterneck E., Kowenz E., Ness S., Frank R.,

Gausepphl H., Pan Y.-C.S., Smart J., Hayman M., Graf T.;

"Molecular cloning of the chicken myelomonocytic growth factor

"eveals relationship to interleukin 6 and granulocyte colony

stimulating factor.";
                                                                                                                                                                                                                                                                                                                                                                                                            GIYCOPTOTEIN;
SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRINTS; PRO0433; IL6GCSFMGF.
PRINTS; PRO0434; INTERLEUKIN6.
Probom; PD008388; GCSF_MGF; 1.
Probom; PD004356; Interleukin_0
                                                                                                                                                                                                                                                                                                                                                                                              CHAIN
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MEDLINE=92195319; PubMed=1549124;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ?fam; PF00489; IL6;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                :cell Kinases. (2016). 12:1728-1735(1992). (Cell. Biol. 12:1728-1735(1992). FUNCTION: Hematopoletic growth factor FUNCTION: Amand colony formation of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SUBCELLULAR
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                    131 QPTQ--GAMPAFASAFQRRAGGVLVASHLQSFLEVSYRVLRHLAQ 173
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SM00126;
                                                                                                                                                                                                                                   Similarity
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                                                                                                                                                          QSFLLKCLEQVRKIQGDGAALQEKLCATYKLCHPEELVLLGHSLGIPWAPLSSCPSQALQ
                                                                                             LAGCLSQLHSGLFLYQGLLQALEGISPELGPTLDTLQLDVADFATTIWQQMEELGMAPAL
                                                        AEVCFTQIRAGLHAYHDSLGAVLRLLPNHTTLVETLQLDAANLSSNIQQQMEDLGLDTVT
                                                                                                                                    QLFLHKNLEFTRKIRGDVAALQRAVCDTFQLCTEEELQLVQPDPHLVQAPLDQCHKRGFQ
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IPR003629; GCSF_MGF.
IPR003573; IL6 MGF GCSF.
IPR003574; Interleukin_6.
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201
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24
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                                                                                                                                                                                                                                 33.9%;
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                                                                                                                                                                                                                                 Score 304; DB 1;
Pred. No. 9.1e-20;
                                                                                                                                                                                                                                                                                                                                                                                                                               Signal.
                                                                                                                                                                                                                                                                                            240A8DD21B4244E6 CRC64;
                                                                                                                                                                                                                 Mismatches
  ::
(See http://www.isb-sib.ch/announce/
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                                                                                                                                                                                                                                                  Length 201;
                                                                                                                                                                                                                                                                                                             (Potential).
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Best Local S
Matches 46
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                                                                                                                                                                                                                                                                                                                                                                                                                                       CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Signal
SIGNAL
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GG; GO:0005125; F:cytokine activity; IEA.
GG; GO:0005138; F:interleukin-6 receptor
GG; GO:0006955; P:immune response; IEA.
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Gallus (Chicken).
Gallus gallus (Chicken).
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ProDom; PD004356; Interleukin_6; 1.
SMART; SM00126; IL6; 1.
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Microbiology 146:3217-3226(2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Kaiser P., Wigley P.;
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01-DEC-2001
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Submitted (JAN-2003) to the EMBL/GenBank/DDBJ
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                                       153
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AJ250838; CAC15566.2;
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                                                                                                                                                                                                                                                                                                                                    46;
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                                                                                                                                                                                                     PEELVILGHSLGIPWAPLSSCPSQALQLAG-----CLSQLHSGLFLYQGLLQALEGISPE
                                                                                                                                                                NSMEMLVRNNLNLP----KVTEEDGCLLAGFDEEKCLTKLSSGLFAFQTYLEFIQETFDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PS00254;
IEKITMHLILRDFTSFMEKTVRAVRYL
                                     ---VASHL----QSFLEVSYRVLRHL
                                                                               EKQNVESLCYSTKHLAATIRQMV----
                                                                                                                      LGPTLDTLQLDVADFATTIWQQMEELGMAPALQPTQGAMPAFASAFQRRAGGVL-----
                                                                                                                                                                                                                                                 LPPAAAVPLPAAADSSGEVGLEEEAGARRALLDCEPLARVLRDRAVQLQDEMCKKFTVCE
                                                                                                                                                                                                                                                                                         LGPASSLP----------QSFLLKCLEQVRKIQGDGAALQEKLCATYKLCH
                                                                                                                                                                                                                                                                                                                                                                                                                    241 AA;
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Salmonella enteritidis and
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mes; Phasianidae; Phasianinae;
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InterPro; IPR003573; II6 MGF GCSF.
InterPro; IPR003574; Interleukin_6.
Pfam; PF00489; II6; 1.
PRINTS; PR00433; IL6GCSFMGF.
PRINTS; PR00434; INTERLEUKIN6.
PRODOm; PR004356; Interleukin_6; 1.
SMART; SM00126; II6; 1.
PROSITE; PS00254; INTERLEUKIN 6; 1.
SEQUENCE 212 AA; 23881 MM; 1F540E7030
              SEQUENCE FROM N.A.

MEDLINB=20141864; PubMed=10678396; DOI=10.1016/S0165-2427(99)00150-6;
St-Laurent G., Archambault D.;
"Molecular cloning, phylogenetic analysis and expression of beluga whale (Delphinapterus leucas) interleukin 6.";
Vet. Immunol. Immunopathol. 73:31-44(2000).

EMBL; AP076643; AAD42929.1; -.
HSSP;
GO; G
                                                                                                                                               Delphinapterus leucas (Beluga whale).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Butheria; Cetartiodactyla; Cetacea; Odontoceti;
                                                                                                                                                                                                                             Q9XT80;
01-NOV-1999
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01-MAR-2004
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                                                                                                                         NCBI_TaxID=9749;
                                                                                                                                      Monodontidae; Delphinapterus.
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HSSP; P05231; 1ALU.
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Mammalia; Eutheria;
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₽; P05231; 1;
GO:0005576;
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GO:0005125; F:cyrokine activity; IEA.
GO:0005138; F:interleukin-6 receptor
GO:0006358; P:immune response; IEA.
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ed (JUN-2002) to the EMBL/GenBank/DDBJ databases
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C:extracellular; IEA.
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SEQUENCE 208 AA; 23456 MW; 81CC85C6E80389C4 CRC64;
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PRINTS; PR00434; INTERLEUKIN6.
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GO:0005138; F:interleukin-6 receptor binding; IEA.
GO:0006955; P:immune response; IEA.
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172 NNLQSQNDDWMRNTKIILILRSLENFLQFSLRAVR 206
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                                                                                                                                            21 VRKIQGDGAALQEKICATYKLCHPEELVLLGHSLGIP-WAPLSSCPSQALQLAGCLSQLH
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                                                      TGLLEYQIYLDYLQNEYEGDKGSIEAVQISIKALAQILRQKVKNPDEVTTPDPTTNASLM 171
                                                                                     SGLFLYQGLLQALEGISPELGPTLDTLQLDVADFATTIWQQMEELGMAPALQPTQGA--- 136
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Search completed: July 9, 2005, 12:53:58
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A;Title: Recombinant human granulocyte colony-stimulating factor: effects on normal and A;Reference number: A47587; MUID:86151684; PMID:2420009 A;Reference number: A47587 A;Molecule type: mRNA A;Residues: 19-204 <sou> A;Cross-references: GB:MM3008; NID:9183044; PIDN:AAA03056.1; PID:9183045 A;Cross-references: GB:MM3008; NID:9183044; PIDN:AAA03056.1; PID:9183045 A;Title: Extracellular domain of granulocyte-colony stimulating factor receptor. A;Reference number: S68331; MUID:96132662; PMID:854326 A;Title: Extracellular domain of granulocyte-colony stimulating factor receptor. A;Reference number: S68331; MUID:96132662; PMID:8554326 A;Accession: S68331 A;Molecule type: protein A;Residues: 'M',31-46 <han> C;Genetics: A;Gene GDB:CSF3 A;Cross-references: GDB:119083; OMIM:138970 A;Map position: 17q11.2-77q12 A;Introne: 14/1; 65/3; 101/3; 150/3 C;Function: A;Description: stimulates the differentiation and proliferation of hematopoietic progen C;Superfamily: interleukin-6 C;Superfamily: interleu</han></sou>	RESULT 1 FQHUGL granulcoyte colony-stimulating factor precursor - human N;Alternate names: colony-stimulating factor 3; G-CSF C;Species: Homo sapiens (man) C;Date: 30-Jun-1988 #sequence revision 18-Aug-1995 #text_change 09-Jul-2004 C;Accession: A25093; A49796; Ā47587; S68331 R;Nagata, S.; Tsuchiya, M.; Asano, S.; Yamamoto, O.; Hirata, Y.; Kubota, N.; Oheda, M.; EMBO J. 5, 575-581, 1986 A;Title: The chromosomal gene structure and two mRNAs for human granulocyte colony-stim A;Reference number: A25093; MUID:86220137; PMID:2423327 A;Accession: A25093; MUID:86220137; PMID:2423327 A;Accession: L-204 <nag- 1-204="" <nev-="" a49796;="" a;cross-references:="" a;reference="" a;residues:="" a;rocession:="" a;rosidues:="" a;title:="" boone,="" by="" cell="" chazi<="" colony-stimulating="" d.c.;="" embl:x03655;="" embl:x03656;="" expression="" factor="" gabrilove,="" gb:m17706;="" granulocyte="" human="" j.;="" k.m.;="" l.m.;="" lai,="" lines.="" mrna="" muid:87196936;="" murdock,="" nid:g183040;="" nid:g31693;="" number:="" of="" p.h.;="" pid:g183041="" pidn:aaa35882.1;="" pidn:caa27290="" pmid:3494801="" r;souza,="" t.c.;="" td="" unifrot:p09919;="" zsebo,=""></nag->

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A;Gene: GDB:CSF3
A;Cross-references: GDB:119083; OMIM:138970
A;Cross-references: GDB:119083; OMIM:138970
A;Map position: 17q11.2-17q12
A;Map position: 14/1; 68/3; 104/3; 153/3
C;Superfamily: interleukin-6
C;Keywords: cytokine; glycoprotein; growth factor; macrophage; monomer
F;1-20/Domain: signal sequence #status predicted <SIG>
F;31-207/Product: granulocyte colony-stimulating factor variant splice
F;69-75,97-107/Disulfide bonds: #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Nature 319, 415-418, 1986
A,Title: Molecular cloning and expression of cDNA for human A,Title: Molecular cloning and expression of cDNA for human A,Teference number: A24573; MUID:86118679; PMID:3484805
A,Accession: A24573
A;Molecule type: mRNA
A,FResidues: 1-207 cANG>
A,FCOSMETE 1-207 cNAG>
A,FCOSMETE This variant splice form is not expressed in thre C;Genetics:
submitted to the EMBL Data Library, A;Description: Cloning, sequence and A;Reference number: Z16630
A;Accession: T09255
A;Status: preliminary; translated fi
                                                                                              granulocyte colony-stimulating factor precursor - (C;Species: Felis silvestris catus (domestic cat) C;Date: 11-Jun-1999 #sequence_revision 11-Jun-1999 C;Accession: T09255 R;Dunham, S.P.; Onions, D.E.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TPLGPASSLPQSFLLKCLEQVRKIQGDGAALQEKL----CATYKLCHPEELVLLGHSLGIP 58
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Pred. No. 4.7e
0; Mismatches
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                                                             September 1996
d expression of
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      GB/EMBL/DDBJ
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A; Description:
C; Superfamily:
C; Keywords: cyt
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                                                                                                                                                                                                                                                                                                                                                                                           A;Status: preliminary; translated A;Molecule type: mRNA A;Residues: 1-174 <OBR>
                                                                                                                                                                                                                                                                                                                                                                                                                                                               DNA Seq. 4, 339-342, 1994
A;Title: Cloning and sequencing of an ovine granulocyte
A;Reference number: Z17009; MUID:95102116; PMID:7528579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         C;Keywords: cytokine; growth factor; macrophage F;1-20/Domain: signal sequence (fragment) #status predicted <SIG>F;21-194/Product: granulocyte colony-stimulating factor #status p
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A;Cross-references: UNIPROT:002708; EMBL:Y08558
C;Function:
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C;Function:
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C; Genetics:
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'Species: Ovis orientalis aries, Ovis ammon aries (domestic sheep)
'Date: 16-Jul-1999 #sequence_revision 16-Jul-1999 #text_change 09-Jul-2004
'Accession: T10268
'O'Brien, P.M.; Seow, H.F.; Rothel, J.S.; Wood, P.R.
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                                                                  LSSCSSQSLQLTSCLDQLHGGLFLYQGLLQALAGISPELAPTLDTLQLDVTDFATNIWLQ
                                                                                                LSSCPSQALQLAGCLSQLHSGLFLYQGLLQALEGISPELGPTLDTLQLDVADFATTIWQQ
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Pred. No. 1.1e-63;
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granulocyte colony-stimulating factor pyAlternate names: G-CSF C;Species: Mus musculus (house mouse) C;Date: 05-Oct-1988 #sequence revision C;Accession: A29536; A26496; S02493

precursor

mouse

05-Oct-1988

#text_change

09-Jul-2004

RESULT A26496

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A;Cross-references: UNIPROT:p97712; GB:U37101; NID:g1680658; PIDN:AAC52915.1; A;Experimental source: skin fibroblasts C;Comment: This recentor acts.
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Biol. Chem. Hoppe-Seyler 368, 1327-1331, 1987
A;Title: Structural studies on the murine granulocyte colony-stimulating A;Reference number: S02493; MUID:88106998; PMID:3501294
A;Accession: S02493
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A;Residues: 31-34,'X',36-43,48-51,'X',53-57;'X',60-71;159-164,'X',166-176;183-198,'X',20
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Proc. Natl. Acad. Sci. U.S.A. 83, 7633-7637, 1986
A;Title: Isolation and characterization of the cDNA for murine granulocyte
A;Reference number: A26496; MUID:87017003; PMID:3489940
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A; Residues: 1-208 <TS2>
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Eur. J. Biochem. 165, 7-12, 1987
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                                                                                                                                                     Comment: .....
;Superfamily: interleukin-6
;1-21/Domain: signal sequence #status predicted <SIG>
;1-21/Domain: oranulocyte colony-stimulating factor #status predicted
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                                                                                                                                                                                                                                                                Comment: This receptor acts on precursor hemapoietic cells to
                                                                                                  Matches
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                                                                                                                       Similarity
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                           MTPLGPASSLPQSFLLKCLEQVRKIQGDGAALQEKLCATYKLCHPEELVLLGHSLGIPWA
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VSSLPPSLPLPRSFLLKSLEQVRKIQARNTELLEQLCATYKLCHPEELVLFGHSLGIPKA
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                                                                                                  Conservative
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                                                                                                                    70.5%;
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                                                                                             12;
                                                                                             Score 635; DB 2;
Pred. No. 3.2e-53;
2; Mismatches 36
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R;Mathialagan, N.; Bixby, J.; Roberts, M.R. Mol. Reprod. Dev. 32, 324-330, 1992
A;Title: Expression of interleukin-6 in porcine, ovine, A;Reference number: 146590; MUID:92360284; PMID:1497880 A;Accession: 146590
                                                                                                                                                                                                                                                                               RESULT
I46590
                                                                                                                                                                                C;Species: Sus scrofa domestica (domestic pig)
C;Date: 21-Feb-1997 #sequence_revision 21-Feb-1997
C;Accession: I46590
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C; Accession: A42247; 803633
R; Sterneck, E.; Blattner, C.; Graf, T.; Leutz, A.
Mol. Cell. Biol. 12, 1728-1735, 1992
A; Title: Structure of the chicken myelomonocytic growth A; Title: Structure A42247: MUID:92195319; PMID:1549124
A;Molecule type: mRNA
A;Residues: 1-212 <MAT>
                                         A;Status: preliminary; translated
                                                                                                                                                                                                                                                           interleukin
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A; Residues: 1-201 < LEU>
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A;Note: sequence extracted from NCBI backbone (NCBIN:89832, NCBIP:89836)
A;Note: A; Damm, K; Sterneck, E; Kowenz, E; Ness, S; Frank, R; Gar
EMBO J. 8, 175-181, 1989
A;Title: Molecular cloning of the chicken myelomonocytic growth factor (A;Reference number: S03633; MUID:89231616; PMID:2785450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Molecule type: DNA
A; Residues: 1-201 <STE>
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Pred. No. 1.2e-21;
                                             from GB/EMBL/DDBJ
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;Cross-references: UNIPROT:P26893; GB:M80258; NID:g164514;

PIDN:AAC27127.1; PID:g16451

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C; Genetics:
A; Gene: IL-6
C; Superfamily:
A;Gene:
                                                                                                     submitted to the EMBL Data Library, July 1996 A; Reference number: Z16613 A; Accession: T09216
                                                                                                                                                                                          interleukin-6 precursor - horse
C;Species: Equus caballus (domestic horse)
C;Date: 11-Jun-1999 #sequence_revision 11-Jun-1999 #text_change 09-Jul-2004
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C;Genetics:
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Cytokine 3, 269-276, 1991
A;Tille: Molecular Cloning and Sequence of
A;Reference number: I46621; MUID:91338547;
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                                                  A;Residues:
                                                                   A; Molecule type: mRNA
                                                                                    A;Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                    T09216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                 Cross-references: UNIPROT:Q95181; EMBL:U64794; NID:g2654387; PID:g2654388
                                                                                                                                                                       Accession: T09216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ;Superfamily: interleukin-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ;Species: Sus scrofa domestica (domes);Date: 21-Feb-1997 #sequence_revision
                  Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
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                                                                                                                                                                                                                                                                                                                          172 NAGLLDKLOSONEWMKNTKIILILRSLEDFLQFSLRAIR 210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     52
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                                                                                                                                                                                                                                                                                                                                                                                                                                 76 LSQLHSGLFLYQGLLQALEGISPELGPTLDTLQLDVADFATTIWQQMEELGMAPALQPT-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                17
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                                                      1-208 <SWI>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -QGAMPAFAS--AFQRRAGGVLVASHLQSFLEVSYRVLR 170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LSQLHSGLFLYQGLLQALEGISPELGPTLDTLQLDVADFATTIWQQMEELGMAPALQPT-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KCLEQVRKIQGDGAALQEKLCATYKLCHPEELVLLGHSLGIP-WAPLSSCPSQALQLAGC
                                                                                                                                                                                                                                                                                                                                                          -QGAMPAFAS--AFQRRAGGVLVASHLQSFLEVSYRVLR 170
                                                                                                                                                                                                                                                                                                                                                                                                LMRITTGLVEFQIYLDYLQKEYESNKGNVEAVQISTKALIQTLRQKGKNPDKATTPNPTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KCLEQVRKIQGDGAALQEKLCATYKLCHPEELVLLGHSLGIP-WAPLSSCPSQALQLAGC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KTEELIKYILGKISAMRKEMCEKYEKCENSKEVLAENNLNLPKMAEKDGCFQSGFNQETC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KTEELIKYILGKISAMRKEMCEKYEKCENSKEVLAENNLNLPKMAEKDGCFQSGFNQETC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAGLLDKLQSQNEWMKNTKIILILRSLEDFLQFSLRAIR 210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    scrofa domestica (domestic pig)
-1997 #sequence_revision 21-Feb-1997
                                                                                                                                                            E.; Horohov,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6 - pig
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                                                                                                                                                              D.₩.
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Pred. No. 0.0094;
3; Mismatches 8!
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        from GB/EMBL/DDBJ
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hypothetical protein VC0886 [imported] - Vibrio cholerae C;Species: Vibrio cholerae C;Date: 18-Aug-2000 #sequence_revision 20-Aug-2000 #text_C;Accession: C82270
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                                                                                                                                                                                                                                                             A; Gene: VC0886
A; Map position:
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                                                                                                                                                                                                                                                                                                                                                                      A; Molecule type: DNA
A; Residues: 1-345 <HEI>
                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Title: DNA Sequence of both chromosomes of the cholera pathogen Vibrio cholerae A;Reference number: A82035; MUID:20406833; PMID:10952301 A;Accession: C82270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     R;Heidelberg, J.F.; Eisen, J.A.; Nelson, W.C.; Clayton, R.A.; Gwinn, M.L.; Dodson, R.J.; chardson, D.; Ermolaeva, M.D.; Vamathevan, J.; Bass, S.; Qin, H.; Dragoi, I.; Sellers, F. I, R.R.; Mekalanos, J.J.; Venter, J.C.; Fraser, C.M.
Nature 406, 477-483, 2000
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C; Keywords: cytokine; growth factor
                                                                                                                                                                                                                                                                                                                          A;Cross-references: UNIPROT:Q9KTL6; GB:AE004172; GB:AE003852; NID:g9655323; PIDN:AAF9404
A;Experimental source: serogroup Ol; strain N16961; biotype El Tor
                                                                                                                                                                                                                                                                                                                                                                                                                 A;Status: preliminary
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Best Local
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283
                                                                               228 ASDPDLFLLAAL--VRALAGAPANILDATCDAILASPAICHPEVLIALA---GRSWMSLE 282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                118 IWQQMEELGMA---PALQPTQGAMPAFASAFQRRAGGVLVASHLQSFLEVSYRVLR 170
                                      64
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                                                                                                                                                                                               Similarity
NSGRAQRFLIRLAQTQNQPLFNQLFADVVMLPALRGVMLPLLHASPSPELAQALEQLQ 340
                                      S---CPSQALQLAGCLSQ-LHSGLFLYQGLLQALEGI-----SPELGPTLDTLQ 108
                                                                                                                           SSLPQSFLLKCLEQVRKIQGDGAALQEKLC----ATYKLCHPEBLVLLGHSLGIPWAPLS 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PLGEDETTSNGPLLTTADKTKQHIKYILGKISALKNEMCNNFSKCENSKEVLAENNLNLP
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                                                                                                                                                                        10.4%; Score 94; DB 32.2%; Pred. No. 0.26 tive 15; Mismatches
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Pred. No. 0.038;
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                                                                                                                                                                                                                 DB 2;
                                                                                                                                                                                               . 26;
                                                                                                                                                                           43;
                                                                                                                                                                                                                    Length 345
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A;Gene: cut
A;Cross-references: FlyBase:FBgn0004198
C;Superfamily: homeotic protein cut; cut
                                                                                                                                                                                                                 Nature 333, 629-635, 1988
A;Title: Primary structure and expression of a product from A;Reference number: $03170; MUID:88232956; PMID:2897632
                                                                                                                                                                                                                                                                                                                    C;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change
C;Accession: S03170
                                                                                             C,Genetics:
                                                                                                                   A;Cross-references: UNIPROT:P10180; EMBL:X07985; NID:g7767;
                                                                                                                                              A;Residues:
                                                                                                                                                                 A; Molecule type:
                                                                                                                                                                                           A; Accession: S03170
                                                                                                                                                                                                                                                                                         R; Blochlinger,
                                                                                                                                                                                                                                                                                                                                                                       C; Species: Drosophila melanogaster
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                                                                                                                                                                                                                                                                                                                                                                                               homeotic protein cut - fruit fly (Drosophila melanogaster)
                                                                                                                                                                                                                                                                                            K.; Bodmer, R.; Jack, J.; Jan, L.Y.; Jan, Y.N
                                                                                                                                                                      mRNA
                                                                                                                                                                                                                                                 cut,
                                                                                                                      PIDN: CAA30794.1;
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repeat

homology;

homeobox homology

PID:97768

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R;Stover, C.K.; Pham, X.Q.; Erwin, A.L.; Mizoguchi, S.D.; Warrener, adman, S.; Yuan, Y.; Brody, L.L.; Coulter, S.N.; Folger, K.R.; Kas, Lory, S.; Olson, M.V.
Nature 406, 959-964, 2000
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A;Molecule type: DNA
A;Residues: 1-666 <STO>
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A; Title: Complete Genome Sequence of Caulobacter crescentus.
A; Reference number: A87249; MUID:21173698; PMID:11259647
A; Accession: A87577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    R;Nierman, W.C.; Feldblyum, I.v.; Function, R.J.; Durkin, A.S.; B.; Laub, M.T.; DeBoy, R.T.; Dodson, R.J.; Surkin, A.S.; n, J.; Ermolaeva, M.; White, O.; Salzberg, S.L.; Shapiro, n, J.; Ermolaeva, M.; White, O.; Salzberg, S.L.; Shapiro, n, J.; Ermolaeva, M.; White, O.; Salzberg, S.L.; Shapiro, n, J.; Ermolaeva, M.; White, O.; Salzberg, S.L.; Shapiro, n, J.; Ermolaeva, M.; Bartland, Sci. U.S.A. 98, 4136-4141, 2001
                                        A;Reference number: A82950;
A;Accession: F83292
A;Status: preliminary
                                                                                                                                                                                                                                C;Date: 15-Sep-2000 #sequence_revision 15-Sep-2000 #text_change 09-Jul-200.
C;Accession: F83292
A; Molecule type: I
A; Residues: 1-786
                                                                                                                                                                                                                                                                        probable sensor/response regulator hybrid PA2824 [imported] -
C;Species: Pseudomonas aeruginosa
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                                                                                                             A; Title: Complete genome
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C; Accession:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     F;1746-1802/Domain: homeobox homology <HOX>
                                                                                                                                                                                                                           Accession:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Date: 20-Apr-2001 #sequence_revision 20-Apr-2001 #text_change 09-Jul-2004
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1617-1689/Domain: cut repeat homology <CU3>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1339-1411/Domain: cut
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1493 AQQAQQAQQHLQQQQALQQHLAQ 1519
                                                                                                                                                                                                                                                                                                                                                                                                                254
                                                                                                                                                                                                                                                                                                                                                                                                                                                         111 VADFATTIWQ-QMEELG---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 51 LGHSLGIPWAPLSSCPSQALQLAGCLSQLHSGLFLYQGLLQALEGISPELGPTLDTLQLD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               35;
                                                                                                                                                                                                                             F83292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                           AATHALTVWKSQVRFLGAGVIGAAAIWTLAKLVGPITSGLKSAFAAAQARKAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LGAASGATGIGASS--SLALMGAGHLMGITVGVAMFTGLFIAWAILVPILTLVTPMPEAD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A87577
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GLASKMQAASLPMQKMMSELKLQEPAQAQHLMQQMQAAAMSAAMQQQQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GLLQALEGISPELGPTLDTLQLDVADFATTIWQQMEELGMAPALQPTQGAMPAFASAFQR 147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DENAVHKLVASQYKIA-PEKLMRTGSYSGSPQMP---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DGAALQEKLCATYKLCHPEELVLLGHSLGIPWAPLSSCPSQALQLAGCLSQLHSGLFLYQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pyrococcus horikoshii hypothetical
6 ASTO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
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                                                                                   sequence of Pseudomonas aeruginosa
50; MUID:20437337; PMID:10984043
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     23.8%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 88.5;
Pred. No. 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 89.5; Di
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                         -MAPALOP-TOGAMPAFASAFORRAGG 151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          I.T.; Nelson, K.E.; Eisen, J.; Heidelberg, J.; Durkin, A.S.; Gwinn, M.L.; Haft, D.H.; Kolon; Vanter. J.C.; Fraser, C.M.
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                                                                                                           PAO1,
                                                                                                                                                                                                                                                                                           Pseudomonas aeruginosa
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                                                                                                           an opportunistic path
                                                                                                                                                                              P.; Hickey,
A.; Larbig,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
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K.; Lim,
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C;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 09-Jul-2004
C;Accession: A56610; S22162
                                                                                                                                                                                                                                                                                                                                                   A;Cross-references: UNIPROT:P26892; EMBL:X57317; NID:g2193; PIDN:CAA40572.1; PID:g2194
A;Experimental source: BLV induced B cell-lymphosarcoma
A;Experimental source: Set from NCBI backbone (NCBIP:118917)
C;Superfamily: interleukin-6
                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Molecule type: mRNA
A; Residues: 1-208 < DRO>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Accession: A56610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DNA Seq. 2, 411-413, 1992
A; Title: Nucleotide sequence of bovine interleukin-6 cDNA, Reference number: A56610; MUID:93076003; PMID:1446077
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Cross-references: UNIPROT:Q91019; GB:AE004709; GB:AE004091; NID:g9948904; PIDN:AAG06; A;Experimental source: strain PAO1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             interleukin-6 precursor - bovine
                                                                                                                                                                                                                                                                     Best
                                                                                                                                                                                                                                                                                          Query Match
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  151
                                    115 ATTIWQQMEELGMAPALQPTQGAMPAFASAFQRRAGGVLVASHLQSFLEVSYRVLR 170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         129
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                                                                                                                    56 GIP-WAPLSSCPSQALQLAGCLSQLHSGLFLYQGLLQALEGISPELGPTLDTLQLDVADF 114
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      83 LFLYQGLLQALEGISPE------LGPTLDTLQLDVADFATTIWQQMEELGMA 128
                                                                                                                                                                                                                                                                                                                              cytokine
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                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            L.; Cludts,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                NLPKMEEKDGCFQSGFNQAICLIRTTAGLLEYQIYLDYLQNEYEGNQENVRDLRKNIRTL
IQILKQKIADLITTPATNTDLLEKMQSSNEWVKNAKIILILRNLENFLQFSLRAIR
                                                                                                                                                                                                     PLG---PASSLPQSFLLKCLEQ----VRKIQGDGAALQEKLCATYKLCHPEBLVLLGHSL
                                                                                                                                                             PLGEDFKNDTTPGRLLLTTPEKTEALIKRMVDKISAMRKEICEKNDECESSKETLAENKL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GDGAALQEKLC-ATYKLCHPEELVLLG--HSLGIPWAPLSSCPSQALQLAG-CLSQLHSG 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PALQPTQGAMPAFASAFQRRAGGVLVASHLQSFL--EVSYRV--LRHLAQP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ----SGLAQLLQTWLPRWGLEYKRLETDDSLLGHSLDVLISDCPDCL------MGLR
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                                                                                                                                                                                                                                                  Conservative
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                                                                                                                                                                                                                                                                 9.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        I.; Cleuter, Y.; Kettmann,
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29.2%;
                                                                                                                                                                                                                                                37;
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                                                                                                                                                                                                                                                                 Score 86; DB 1
Pred. No. 0.83;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -GTPILLVTAYGSFLEPELARRLSPLRQLARP
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Pred. No. 2
                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                      DB 1; Length 208
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                                                                                                                                                                                                                                                95;
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Search completed: July 9, 2005, 12:45:23 Job time : 14.5387 secs

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Result
No.
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Maximum Match 100%
Listing first 45 summaries
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Maximum DB seq length: 200000000
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Perfect score:
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                                                                                                                                                                                          702
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Gapop 10.0 , Gapext 0.5
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    UniProt_03:*
1: uniprot_sprot:*
2: uniprot_trembl:*
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901
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PR ProDom; PD008388; GCSF MGF; 1.

R ProDom; PD004356; Interleukin_6; 1.

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Hirata Y., Kubota N., Oheda M., No
"Molecular cloning and expression
colony-stimulating factor.";
Nature 319:415-418(1986).
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X03438; M13008; X03656; X03655;

AAA03056.1; CAA27291.1; CAA27290.1; CAA27168.1; entities requires a license agreement (or send an email to license@isb-sib.ch)

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MEDILINE-30281718; Pubmed-7685117;

Hill C.P., Osslund T.D., Eisenberg D.;

"The structure of granulocyte-colony-stimulating factor and relationship to other growth factors.";

Proc. Natl. Acad. Sci. U.S.A. 90:5167-5171(1993).

-I- FUNCTION: Granulocyte/macrophage colony-stimulating factor eytokines that act in hematopoiesis by controlling the differentiation, and function of 2 related white cell pof the blood, the granulocytes and the monocytes-macrop CSF induces granulocytes.

-I- SUBCELLULAR LOCATION: Secreted.

-I- ALTERNATIVE PRODUCTS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE-93293942; PubMed=7685769; Clogston C.L., Hu S., Boone T.C., Lu H.S.; Clogston C.L., Boone T.C., Lu H.S.; and chromatographic analysis of recombinant human granulocyte colony-stimulating factor glycoform produced in Chinese hamster ovary cells."; J. Chromatogr. A 637:55-62(1993).
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Zink T., Ross A., Luers K., Cieslar C.,
"Structure and dynamics of the human gr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Murdock D.C., Chazin V.R., Bruszewski J., Lu H., C Barendt J., Platzer E., Moore M.A.S., Mertelsmann "Recombinant human granulocyte colony-stimulating normal and leukemic myeloid cells.";
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bundle protein.";
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PTM: O-glycan consists of Gal-GalNac disaccharide which can be modified with up to two sialic acid residues (done in recombinantly expressed G-CSF from CHO cells).

PHARMACEUTICAL: Available under the names Neupogen or Granulokine (Amgen/Roche) and Granocyte (Rhone-Poulenc). Used to treat neutropenia (a disorder characterized by an extremely low number of neutrophils in blood).

SIMILARITY: Belongs to the II-6 superfamily.

CAUTION: Ref. 4 misquotes the gene name as "CSF1".

DATABASE: NaME=Neupogen/Granulokine;
                                                                                                                                                                                                                NOTE=Clinical information on Neupogen/Granulokine; WWW="http://www.neupogen.com/".
                                                                                                                                                                                                                                                                                                                                                                                                                                    Name=Short;
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welte K.;
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Best Local
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30-MAY-2000

05-WIL-2004
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PDB; 1RHG; X-ray; A/B/C=31-207.
Genew; HGNC:2438; CSF3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL;
PIR; /
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE
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PROSITE; PS00254; INTERLEUKIN 6; 1.

3D-structure; Alternative splicing; Cytokine; Growth factor; Pharmaceutical; Polymorphism; ?
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRINTS; PR00433; IL6GCSFMGF.
ProDom; PD008388; GCSF_MGF; 1.
SMART; SM00126; IL6; 1.
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InterPro; IPR003629; GCSF MGF.
InterPro; IPR003573; IL6_MGF_GCSF.
Pfam; PF00489; IL6; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GO:0005615; C:extracellular space; TAS.
GO:0005130; F:granulocyte colony-stimulating factor recep.
GO:0007275; P:development; TAS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GO:0008284; P:
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1CD9; X-ray; A/C=30
1GNC; NMR; @=30-207
                                                                                                                                                                                        151
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M17706; AA
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                                                                                                                                                                                                                                                                                   WAPLSSCPSQALQLAGCLSQLHSGLFLYQGLLQALEGISPELGPTLDTLQLDVADFATTI 118
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                 (Rel. 39,
(Rel. 39,
(Rel. 44,
(Rel. 39, Last sequence update) (Rel. 44, Last annotation updat colony-stimulating factor precu
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                                                                                             STANDARD;
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Pred. No. 8.1e-73;
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(FTId=VSP 002673.
L -> M (in dbSNP:2227329).
/FTId=VAR 013073.
A -> T (in dbSNP:2227330).
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                                                                                              PRT;
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precursor
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signal.
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   (G-CSF)
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SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SIGNAL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro; IPR003629; GCSF MGF.
InterPro; IPR003573; IL6 MGF GCSF.
InterPro; IPR003574; Interleukin_6.
Pfam; PF000489; IL6; 1.
pp1NTS. PP00489; IL6; 1.
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ProDom;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  entities requires a license agreement (S or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              the European Bioinformatics Institute. The use by non-profit institutions as long modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SMART;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRINTS; PR00433;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL; Y08558; CAA69853.1; -. PIR; T09255; T09255.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      feline granulocyte colony-stimulating
Cytokine 14:347-351(2001)
-!- FUNCTION: Granulocyte/macrophage (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=9685;
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Carnivora; Fissipedia; Felidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HSSP; P09919; 1RHG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STRAIN=European shorthair; TISSUE=Lung;
MEDLINE=21389237; PubMed=11497496; DOI=10.1006/cyto.2001.0910;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro; IPR009079; 4 helix cytokine.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "Isolation, nucleotide sequence and expression of a feline granulocyte colony-stimulating factor.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Dunham S.P.,
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SIMILARITY: Belongs to the IL-6 superfamily.
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SUBCELLULAR LOCATION: Secreted.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FUNCTION: Granulocyte/macrophage colony-stimulating factors are cytokines that act in hematopolesis by controlling the production, differentiation, and function of 2 related white cell populations of the blood, the granulocytes and the monocytes-macrophages. This
                                                                                                                  141
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                                                                                                                                                         MEELGMAPALOPTOGAMPAFASAFORRAGGVLVASHLOSFLEVSYRVLRHLAOP
                                                                                                                                                                                                     LSSCSSQALQLTGCLRQLHSGLFLYQGLLQALAGISPELAPTLDMLQLDITDFAINIWQQ
                                                                                                                                                                                                                                                      LSSCPSQALQLAGCLSQLHSGLFLYQGLLQALEGISPELGPTLDTLQLDVADFATTIWQQ 121
                                                                                                                                                                                                                                                                                                                                                TPLGPASSLPQSFLLKCLEQVRKIQGDGAALQEKLCATYKLCHPEELVLLGHSLGIPWAP
                                                                                                             MEDVGMAPAVPPTQGTMPTFTSAFQRRAGGTLVASNLQSFLEVAYRALRHFTKP
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                                                                                                                                                                                                                                                                                                                                                                                                                       82.6%;
81.0%;
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Pred. No. 5.4e-60;
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Granulocyte colony-stimulating
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By similarity.
O-linked (GalNAc. . .) (By simi
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    There are no restrictions ong as its content is in
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Best Local (
                                                                                                                                                                                                             CSF3 CANFA
P35834;
01-JUN-1994
01-JUN-1994
25-OCT-2004
                                                                                                 Canis familiaris (Dog).
Canis familiaris (Dog).
Eukaryota; Metazoa; Chordata; (
Mammalia; Eutheria; Carnivora;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Signal.
SIGNAL
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   granulocyte colony-stimulating factor."; Gene 274:263-269(2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q9GJU0;
01-MAR-2001
01-MAR-2001
05-JUL-2004
                                                                                                                                                                     Granulocyte
Name=CSF3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pfam; PF00489; IL6; 1.
PRINTS; PR00433; IL6GCSFMGF.
PRINTS; PR00434; INTERLEUKING.
ProDom; PD008388; GCSF MGF; 1.
SMART; SM00126; IL6; 1.
X-RAY CRYSTALLOGRAPHY (2.2 ANGSTROMS)
MEDLINE=94076341; PubMed=7504736;
Lovejoy B., Cascio D., Eisenberg D.;
                                                                                                                                                                                                                                                                                                                     CANFA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HSSP;
GO; G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PROSITE; PS00254; INTERLEUKIN_6; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GO; GO:0005576; C:extracellular; IEA.
GO; GO:0005125; F:cytokine activity; IEA.
GO; GO:0005138; F:interleukin-6 receptor
GO; GO:0006955; P:immune response; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL; AB042553; BAB17789.1; -. EMBL; AB042553; BAB17757.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Tsujimoto H., Hasegawa A., Tuchiya I molecular cloning and expression granulocyte color
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE=21531548; PubMed=11675019;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Felis silvestris catus (Cat).
Eukaryota; Metazoa; Chordata; C
Mammalia; Eutheria; Carnivora;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Granulocyte colony-stimulating Name=G-CSF;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=9685;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               [nterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      nterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                P35834;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TPLGPTSSLPQSFLLKCLEQVRKVQADGTALQERLCAAHKLCHPEELVLLGHALGIPQAP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TPLGPASSLPQSF1LKCLEQVRKIQGDGAALQEKLCATYKLCHPEELVLLGHSLGIPWAP
                                                                                                                                                                                                                                                                                                                                                                                                      MEDVGMAPAVPPTQGTMPTFTSAFQRRAGGTLVASNLQSFLEVAYRALRHFTKP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LSSCSSQALQLTGCLRQLHSGLFLYQGLLQALAGISPELAPTLDMLQLDITDFAINIWQQ
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IPR003629; GCSF_MGF.
IPR003573; IL6_MGF_GCSF.
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                                                                                                                                                                                                               (Rel.
(Rel.
(Rel.
                                                                                                                                                                                         colony-stimulating
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(TrEMBLrel. 16, Last sequence update)
(TrEMBLrel. 27, Last annotation update)
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29, Last sequence 45, Last anno
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21255 MW;
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t annotation of
ating factor
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1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 744; DB 2; |
Pred. No. 5.4e-60;
1; Mismatches 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cytokine.
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                                                                                                     Craniata; Ve: ; Fissipedia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Craniata; Vertebrata; ; Fissipedia; Felidae;
                                                                                                                                                                                                                                                                                                 PRT;
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Katsumata A., Oishi K., Saito T.,
                                                                                                                                                                                                                                   update)
                                                                                                                                                                                                                                                                                                 175
                                                                                                                                                                                         update)
(G-CSF)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       precursor
                                                                                                         Vertebrata;
ia; Canidae;
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Canis.
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Felis.
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RESULT 6
CSF3_SHEEP
CSF3_f
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Best Local S
Matches 141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro; IPRO09079; 4 helix cytokir
InterPro; IPRO03629; GCSF MGF.
InterPro; IPRO03573; I.6 MGF_GCSF.
Pfam; PF00489; II6; 1.
PRIMTS; PRO0433; II.6GCSFMGF.
PRODOM; PD008388; GCSF MGF; 1.
SMART; SM00126; II.6; 1.
Ovis aries (Sheep).
Eukaryota; Metazoa; (Mammalia; Eutheria; (Caprinae; Ovis.
NCBI_TaxID=9940;
                                                                                                                                                                                                                                                                                                      TURN
HELIX
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STRAND
SEQUENCE
                                                                          30-MAY-2000
30-MAY-2000
                                                       Granulocyte colony-stimulating
                                                                                              Q28746;
                                                                                                                                                                                                                                                                                                                                                                       STRAND
HELIX
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   factor (G-CSF)."
J. Mol. Biol. 23
                                                Name=CSF3;
                                                                  05-JUL-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PROSITE; PS00254; INTERLEUKIN_6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PDB; 1BGD; X-ray; @=1-175.
PDB; 1BGE; X-ray; A/B=1-175.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                        DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           D-structure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    differentiation, and function of 2 of the blood, the granulocytes and CSF induces granulocytes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SIMILARITY: Belongs to the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PTM: O-glycosylated.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SUBUNIT: Monomer.
SUBCELLULAR LOCATION: Secreted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FUNCTION: Granulocyte/macrophage colony-stimulating factors are cytokines that act in hematopoiesis by controlling the production, differentiation, and function of 2 related white cell populations of the blood, the granulocytes and the monocytes-macrophages. This
                                                                                                        SHEEP
                                                                                                                                                     121
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                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                   141;
                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                              PLSSCPSQALQLAGCLSQLHSGLFLYQGLLQALEGISPELGPTLDTLQLDVADFATTIWQ
                                                                                                                                                                                                                                       MTPLGPASSLPQSFLLKCLEQVRKIQGDGAALQEKLCATYKLCHPEELVLLGHSLGIPWA
                                                                                                                                                                                         PLSSCSSQALQLMGCLRQLHSGLFLYQGLLQALAGISPELAPTLDTLQLDTTDFAINIWQ
                                                                                                                                                                                                                             MAPLGPTGPLPQSFLLKCLEQMRKVQADGTALQETLCATHQLCHPEELVLLGHALGIPQP
                                                                 (Rel. 39, (Rel. 39, Rel. 44,
                                                                                                                                                                                                                                                                                                        175 AA;
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12
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63
72
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65 75
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                                                                                                       STANDARD;
                                                                                                                                                                                                                                                                                                                           of canine
                    Chordata; Craniat
Cetartiodactyla;
                                                                                                                                                                                                                                                                          82.0%;
80.6%;
                                                                                                                                                                                                                                                                                                        18858 MW;
                                                                  Last annotation
                                                                          Last
                                                                                     Created)
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F_MGF.
                                                                                                                                                                                                                                                                   11,
                                                                          sequence update)
                                                                                                                                                                                                                                                                   Score 739; DB Pred. No. 1.4e.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       and
                                                                                                                                                                                                                                                                                                                                                                                                                                                O-linked (GalNAc.
                     Craniata; Vertebrata; Eute
actyla; Ruminantia; Pecora;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IL-6
                                                                                                                                                                                                                                                                                                        28C26B24990C6DB3 CRC64;
                                                        factor
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                                                        update)
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                                                                                                                                                                                                                                                                                     DB 1;
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                               eostomi;
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Best Local S
Matches 143
                                                                                                                     3_BOVIN STAI
CSF3_BOVIN STAI
P35833; Q9TV89;
01-JUN-1994 (Rel. ;
  Bovinae;
                                                                          16-OCT-2001 (Rel. 40, Last sequence up 25-OCT-2004 (Rel. 45, Last annotation Granulocyte colony-stimulating factor
                                                                                                                                                                                                                                                                                                                                                                                                                                    CARBOHYD
SEQUENCE
                                     Bos taurus (Bovine)
Eukaryota; Metazoa;
                                                                 Name=CSF3; Synonyms=GCSF;
                          Mammalia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRINTS; PR00433; IL6GCSFMGF. ProDom; PD008388; GCSF_MGF; 1. SMART; SM00126; IL6; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 InterPro; IPR009079; 4 helix cytokine.
InterPro; IPR003629; GCSF MGF.
InterPro; IPR003573; IL6 MGF GCSF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                               DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Cytokine; Glycoprotein; Growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PROSITE; PS00254; INTERLEUKIN_6; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 entities requires a license agreement ( or send an email to license@isb-sib.ch)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           use by non-profit institutions as long modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HSSP; P09919; 1RHG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     - i -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE=95102116; PubMed=7528579; O'Brien P.M., Seow H.F., Rothel J.S., "Cloning and sequencing of an ovine g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                factor cDNA.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        [1]
SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PTM: O-glycosylated (By similarity).
SIMILARITY: Belongs to the IL-6 superfamily.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       European Bioinformatics Institute.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SUBCELLULAR LOCATION: Secreted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SUBUNIT: Monomer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FUNCTION: Granulocyte/macrophage colony-stimulating factors are cytokines that act in hematopoiesis by controlling the production, differentiation, and function of 2 related white cell populations of the blood, the granulocytes and the monocytes-macrophages. This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Seq.
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                                                                                                                                                                                                                                                                                                                                                                                143;
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F10268; T10268.
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                                                                                                                                                                                                                                                                                                                                                                                              Similarity
               Bos.
                                                                                                                                                                                                                                MEELGMAPALQPTQGAMPAFASAFQRRAGGYLVASHLQSFLEVSYRVLRHLAQP 175
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                                                                                                                                                                                                                  MEDLGVAPAVQPTQGTMPTFTSAFQRRAGGVLVASQLQRFLGLAYRGLRYLAEP
                                                                                                                                                                                                                                                                    LSSCSSQSLQLTSCLDQLHGGLFLYQGLLQALAGISPELAPTLDTLQLDVTDFATNIWLQ
                                                                                                                                                                                                                                                                                      LSSCPSQALQLAGCLSQLHSGLFLYQGLLQALEGISPELGPTLDTLQLDVADFATTIWQQ
                                                                                                                                                                                                                                                                                                                       TPLGPARSLPQSPLLKCLEQVRKTQADGAELQERLCATHKLCHPEELVLLGHSLGTPQAP
                                                                                                                                                                                                                                                                                                                                                   TPLGPASSLPQSFLLKCLEQVRKIQGDGAALQEKLCATYKLCHPEELVLLGHSLGIPWAP
                            Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4:339-342(1994).
                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                               36
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A
                                                                                                                                                 STANDARD;
                                                                                                                     29, Created)
                       Chordata; Craniata; Vertebrata; Euteleostomi; Cetartiodactyla; Ruminantia; Pecora; Bovidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                     18806
                                                                                                                                                                                                                                                                                                                                                                                                                                                               42
74
                                                                                                                                                                                                                                                                                                                                                                            81.9%; Score 738; DB 1;
82.2%; Pred. No. 1.7e-59;
tive 10; Mismatches 21
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                                                                                                                                                                                                                                                                                                                                                                                                                                               By similarity.
By similarity.
O-linked (GalNAc.
                                                                                                                                                                                                                                                                                                                                                                                                                                   BASAA8F8D23ACD1E
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                                                                             precursor
                                                                                                                                                195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Wood P.R.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      There are no restrictions ong as its content is in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Usage
                                                                                                                                                                                                                                                                                                                                                                                                       Length 174;
                                                                              (G-CSF).
                                                                                                                                                                                                                                                                                                                                                                                                                                   CRC64;
(By similarity)
                                                                                                                                                                                                                                                                                                                                                                               Indels
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중 유

62

TPLGPARSLPQSFLLKCLEQVRKIQADGAELQERLCAAHKLCHPEELMLLRHSLGIPQAP

18

LSSCPSQALQLAGCLSQLHSGLFLYQGLLQALEGISPELGPTLDTLQLDVADFATTIWQQ 121

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                                                                               Query Match
Best Local Similarity
Matches 141; Conser
                                                                                         HELIX
HELIX
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DISULFID
DISULFID
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CONFLICT
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HELIX
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                                                                                                                                                                                                                                HELIX
                                                                                                                                                                                                                                                                                                                                                                           PDB; 1BGC; X-ray; @=22-195.
InterPro; IPR009079; 4 helix cytokine.
InterPro; IPR003629; GCSF MGF.
InterPro; IPR003573; IL6 MGF GCSF.
                                                                                                                                                                                                                                                                                                   SIGNAL
                                                                                                                                                                                                                                                                                                                                     SMART;
                                                                                                                                                                                                                                                                                                                                              PRINTS; PR00433; 1
ProDom; PD008388;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 entities requires a license agreement (some send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       the European Bioinformatics Institute. There are no restrictions use by non-profit institutions as long as its content is in modified and this statement is not removed. Usage by and for commodified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 factor (G-CSF).";
J. Mol. Biol. 234:640-653(1993).
-!- FUNCTION: Granulcyte/macrophage
                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL; AF092533; AAD16102.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -!- SUBUNIT: Monomer.-!- SUBCELLULAR LOCATION: Secreted.-!- PTM: O-glycosylated.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             colony stimulating factor."; Submitted (SEP-1998) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                         PROSITE; PS00254;
                                                                                                                                                                                                                                                                                                                                                                     Pfam; PF00489; IL6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            between
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This SWISS-PROT entry is copyright. It is produced through
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -!- SIMILARITY: Belongs to the IL-6 superfamily.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        X-RAY CRYSTALLOGRAPHY (1.7 ANGSTROMS).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A. STRAIN-Holstein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "Cloning, sequencing, and analysis of cDNA encoding bovine granulocyte colony stimulating factor.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Heidari M., Kehrli M.E. Jr.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Lovejoy B., Cascio
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FUNCTION: Granulocyte/macrophage colony-stimulating factors an cytokines that act in hematopolesis by controlling the product differentiation, and function of 2 related white cell population the blood, the granulocytes and the monocytes-macrophages.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CSF induces granulocytes.
                                                                                                                                                                                                                                                                                                                                   SM00126; IL6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            the Swiss Institute
TPLGPASSLPQSFLLKCLEQVRKIQGDGAALQEKLCATYKLCHPBELVLLGHSLGIPWAP

    Cascio D., Eisenberg D.,
    structure of canine and bovine granulocyte-colony

                                                                               195
                                  Conservative
                                                                                                                                                  22
857
93
32
70
70
76
83
83
                                                                                                                                                                                                                                                                                                              Cytokine;
                                                                              A,
                                                                                                                                                                                                                                                                                                                                                           IL6GCSFMGF.
                                                                                                                                                                                                                                                                                                                       INTERLEUKIN_6; 1
                                                                                                                                                                                                                                                                                                                                            GCSF_MGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PubMed=7504736;
                                                                                                      75
85
89
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115
120
145
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95
154
154
60
60
                                             80.7%;
                                                                              21431 MW;
                                                                                                                                                                                                                                                                                                Glycoprotein; G
Potential
                                11;
                              Score 727; DB 1;
Pred. No. 1.9e-58;
1; Mismatches 22
                                                                                                                                                                                                                                         O-linked
TS -> RG
                                                                                                                                                                                                                                                                                      Granulocyte colony-stimulating factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         of Bioinformatics and the
                                                                             8C06119E4ADFBA73 CRC64;
                                                                                                                                                                                                                                         (GalNAc.
                                                                                                                                                                                                                                                                                                            Growth factor; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                               (See http://www.isb-sib.ch/announce/
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                                                     Length
                                 Indels
                                                                                                                                                                                                                                                    (By similarity)
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ophages. This
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RESULT 8
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AC CSP3
AC CSP3
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Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CSF3_PIG STANDAND,
002837; O19180;
15-JUL-1998 (Rel. 36, Created)
30-MAX-2000 (Rel. 39, Last sequence update)
05-JUL-2004 (Rel. 44, Last annotation update)
05-JUL-2004 (Rel. 44 inulating factor precursor
                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL; Y10494; (EMBL; U68482; JEMBL; U68481; JEMBL; U68481; JEMBL; P09919;
                                                                                     DISULFID
DISULFID
CARBOHYD
CONFLICT
                                                                                                                                                                                                                           PROSITE; i
Cytokine;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            This SWISS-PROT entry is copyright. It is produced through a c between the Swiss Institute of Bioinformatics and the EMBL the European Bioinformatics Institute. There are no restrict use by non-profit institutions as long as its content is modified and this statement is not removed. Usage by and fo entitles requires a license agreement (See http://www.isb-sib.or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gloster S.E., Sandeman R.M., "Cloning of a CDNA and gene stimulating factor.";
Submitted (SEP-1997) to the I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A. Kulmburg P.;
                                                                  SEQUENCE
                                                                                                                                                                                                                                                                    SMART; SM00126; IL6;
                                                                                                                                                                                                                                                                                    PRINTS; PR00433; IL6GCSFMGF.
ProDom; PD008388; GCSF_MGF; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Submitted (JAN-1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sus scrofa (Pig).
                                                                                                                                                                                   CHAIN
                                                                                                                                                                                                    SIGNAL
                                                                                                                                                                                                                                                                                                                                        Pfam; PF00489;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TISSUE=Liver;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=9823;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Name=CSF3;
                                                                                                                                                                                                                                                                                                                                                      nterPro;
                                                                                                                                                                                                                                                                                                                                                                                   nterPro;
                                                                                                                                                                                                                                                                                                                                                                                                          nterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FUNCTION: Granulocyte/macrophage colony-stimulating factors are cytokines that act in hematopoiesis by controlling the production differentiation, and function of 2 related white cell populations of the blood, the granulocytes and the monocytes-macrophages. This cyfinduces granulocytes (By similarity).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PTM: O-glycosylated (By similarity). SIMILARITY: Belongs to the IL-6 superfamily.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SUBCELLULAR LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SUBUNIT: Monomer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   142
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEELGMAPALQPTQGAMPAFASAFQRRAGGVLVASHLQSFLEVSYRVLRHLAQP
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Glycoprotein; Growth factor; Signal.
                                                                                                                                                                                                                                                                                                                                                      IPR009079; 4 helix cytokine.
IPR003629; GCSF_MGF.
IPR003573; IL6_MGF_GCSF.
                                                                                                          22
57
154
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                                                                                                                                                                                                                                                                                                                                        IL6;
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195
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154
123
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Cetartiodactyla; Suina; Suidae;
                                                                  21214
77.9%;
79.2%;
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                                                                    MW;
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                                                                                Potential.

Granulocyte colony-stimulating
By similarity.

By similarity.
O-linked (GalNAc. . . ) (By similarity.
A -> R (in Ref. 1).
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Score
Pred.
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                                                                    84787F20DB0AEA1C
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702;
  2; DB 1;
. 3.8e-56;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                databases
                       Length 195;
                                                                    CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (G-CSF)
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Sus.
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                                                                                                               similarity)
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RESULT
CSF3_MC
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       EMBL; M13926; AAA37672.1;
EMBL; X05402; CAA28986.1;
PIR; A29536; A26496.
HSSP; P09919; 1RHG.
MGD; MGI:1339751; C6f3.
                                                                                                                    the European Bioinformatics Institute. There are no restrictions use by non-profit institutions as long as its content is in modified and this statement is not removed. Usage by and for con
                                                                                                                                                                               This
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05-JUL-2004 (Rel. 44, Last annotation update)
Granulocyte colony-stimulating factor precursor
                                                                                                                                                                                                                                                                                                                                      Biol.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Name=Csf3; Synonyms=Csfg;
Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-MAR-1989 (Rel. 10,
01-MAR-1989 (Rel. 10,
05-JUL-2004 (Rel. 44,
                                                                                            or send an email to license@isb-sib.ch).
                                                                                                                                                                                                           +
                                                                                                                                                                                                                                                                                                                                                                                                                                                    stimulating factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE=87190474; PubMed=3494605; Tsuchiya M., Kaziro Y., Nagata S.; "The chromosomal gene structure fo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE=87017003; PubMed=3489940;
Tsuchiya M., Asano S., Kaziro Y., N
"Isolation and characterization of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   P09920;
                                                                                                        entities requires a
                                                                                                                                                                between
                                                                                                                                                                                                                                                                                                                                                                               Simpson R.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    colony-stimulating factor.
                                                                                                                                                                                                                                                                                                                                                   factor.
                                                                                                                                                                                                                                                                                                                                                                                            PubMed=3501294;
                                                                                                                                                                                                                                                                                                                                                                                                           PARTIAL SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                  Structural studies
                                                                                                                                                                                                       PTM: O-glycosylated (By similarity). SIMILARITY: Belongs to the IL-6 superfamily.
                                                                                                                                                                                                                                      SUBCELLULAR LOCATION: Secreted
                                                                                                                                                                                                                                                    SUBUNIT: Monomer
                                                                                                                                                                                                                                                               of the blood, the granulocytes CSF induces granulocytes.
                                                                                                                                                                                                                                                                                           cytokines that act
differentiation, ar
                                                                                                                                                                                                                                                                                                                        FUNCTION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  123
                                                                                                                                                                                                                                                                                                                                    Chem. Hoppe-Seyler 368:1327-1331(1987)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Natl. Acad.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            137;
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                                                                                                                                                                                                                                                                                                                                                                                                                                       Biochem.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PLGPASSLPQSFLLKCLEQVRKIQGDGAALQEKLCATYKLCHPEELVLLGHSLGIPWAPL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SSCSSQALQLTGCLNQLHGGLVLYQGLLQALAGISPELAPALDILQLDVTDLATNIWLQM
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studies on th
                                                                                                                                                                                                                                                                              Granulocyte/macrophage colony-stimulating factors and that act in hematopoiesis by controlling the productiation, and function of 2 related white cell populastication, and the monocytes-macrophages.
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                                                                                                                                                                                                                                                                                                                                                                                                                                      165:7-12 (1987)
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                                                                                                           license agreement
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                                                                                                                                                                                                                                                                                                                                                                Nicola N.A.;
he murine gra
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Craniata; Vertebrata; Euteleosto
Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      83:7633-7637(1986)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRT;
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f the cDNA for murine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  murine
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                                                                                                          (See http://www.isb-sib.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                  granulocyte
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (G-CSF).
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IPR009079; 4_helix_cytokine

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SOR REPORTED TO THE PROPERTY OF THE PROPERTY O
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Best Local Sim
Matches 127;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches 129;
                                                                                  PROSITE;
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE=97074656; PubMed=891708
Han S.W., Ramesh N., Osborne W.
"Cloning and expression of the
                                                                                                                                                                                                                                                                  PIR; JC5043; JC5043.

HSSP; P09919; IRHG.
GO; GO:0005576; C:extracellular; IEA.
GO; GO:0005125; F:cytokine activity; IEA.
GO; GO:0008083; F:growth factor activity;
GO; GO:0006955; P:immune response; IEA.
                                                                                                                                                                                                                                                                                                                                                                                              EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Granulocyte colony stimulating Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata; (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CARBOHYD
SEQUENCE
                                                                                                                       PRINTS; PR00433; IL6GCSFMGF.
ProDom; PD008388; GCSF_MGF; 1.
SMART; SM00126; IL6; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Signal.
SIGNAL
                                                                                                                                                                                    InterPro; IPR009079; 4 helix cytok InterPro; IPR003629; GCSF MGF. InterPro; IPR003573; IL6 MGF GCSF. Pfam; PF00489; IL6; 1.
                                                                                                                                                                                                                                                                                                                                                                                                Gene 175:101-104(1996).
EMBL; U37101; AAC52915.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-MAY-1997
01-MAR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   P97712;
01-MAY-1997
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                                                                                                                                                                                                                                                                                                                                                                                                                                       stimulating factor.",
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mammalia;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Cytokine; Direct protein sequencing; Glycoprotein; Growth factor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRINTS; PRO0433; ILGGCSFMGF; 1.
PRODOM; PD004356; GCSF_MGF; 1.
ProDom; PD004356; Interleukin_6;
SMART; SM00126; IL6; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           InterPro; IPR003629; GCSF MGF.
InterPro; IPR003573; IL6_MGF_GCSF.
Pfam; PF00489; IL6; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PROSITE; PS00254; INTERLEUKIN_6; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10
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                       Similarity
                                                                                    PS00254;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SISGCSSQALQQTQCLSQLHSGLCLYQGLLQALSGISPALAFTLDLLQLDVANFATTIWQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  QMENLGVAPTVQPTQSAMPAFTSAFQRRAGGVLAISYLQGFLETARLALHHLA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; Metazoa; Chordata;
Eutheria; Rodentia;
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                                                                                  INTERLEUKIN_6; 23659 MW; 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PubMed=8917083; DOI=10.1016/0378-1119(96)00131-X;
N., Osborne W.R.;
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03, Last sequence update)
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nulating factor.
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  12;
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  Score 635; DB 2;
Pred. No. 5.6e-50;
2; Mismatches 36
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Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Granulocyte colony-stimulating factor. By similarity.
By similarity.
O-linked (GalNAc. . .) (By similarity)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Craniata; Vertebrata; | Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRT;
                                                                                  ; 1.
29BB88B17B684C55 CRC64;
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No. 1.2e-50;
33
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                                       Length 214;
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    Indels
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  Gaps
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MGF_CHICK
ID MGF_CHICK
AC P13854;
DT 01-JAN-1990
DT 01-JAN-1990
DT 28-FEB-2003
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Matches
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SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro; IPR003573; IL6 MGF GCSP.
Pfam; PF00489; IL6; 1.
PRINTS; PR00433; IL6GCSFMGF.
ProDom; PD008388; GCSF MGF; 1.
SMART; SM00126; IL6; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A., Noronha L.E., Takafuji V.A., Submitted (APR-2002) to the 1 EMBL; AF503365; AAM34205.1; HSSP; P35833; 1BGC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GO; GO:0005576; C:extracellular; IEA.
GO; GO:0005125; F:cytokine activity; IEA.
GO; GO:0008083; F:growth factor activity;
GO; GO:0006955; P:immune response; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Perissodactyla; Equidae; Equus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Granulocyte colony-stimulating factor.
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01-OCT-2002 (TrEMBLrel. 22,
01-MAR-2004 (TrEMBLrel. 26,
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01-OCT-2002
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 InterPro; IPR009079; 4_helix_cytokine.
InterPro; IPR003629; GCSF_MGF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local
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                                                                                                                                                                                                                                                                                                                                                                                    61
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              101;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  87
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MLLGHSLGIPQPLLSSCSSQALQLTGCLSQLHSGLLLYQGLLQALAGISPELAPTLDMLQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PS00254; INTERLEUKIN_6;
127 AA; 13657 MW; 2
                                                                                                                                                                                                                                                                             LRYLAEP 127
                                                                                                                                                                                                                                                                                                                                                                                    LDVTDFATNIWQQMEDLGVAPVVQPTHGPMPTFASAFQRRAGGVLVASNLQRFLELAYRG
                                                                                                                                                                                                                                                                                                                                                                                                                 LDVADFATTIWQQMEELGMAPALQPTQGAMPAFASAFQRRAGGVLVASHLQSFLEVSYRV 168
                                                                                                                                                                                                                                                                                                                                LRHLAQP
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         56.7%;
nilarity 79.5%;
Conservative
                  (Rel. 13, Created)
(Rel. 13, Last sequence up
(Rel. 41, Last annotation
tic growth factor precursor
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                                                                                                                                                 STANDARD;
                                                                                                                                                                                                                                                                                                                                175
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EMBL/GenBank/DDBJ databases.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 511; DB 2;
Pred. No. 7e-39;
9; Mismatches 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Created)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
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Myelomonocytic

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Query Match
Best Local
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DISULFID
CARBOHYD
CARBOHYD
SEQUENCE
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EMBL; X14477; CAA32639.1; -.
PIR; A42247; A42247
HSSP; P09919; 1RHG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              entities requires a license agreement (S or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                 CHAIN
                                                                                                                                                                                                                                                                                                                                                                                      ProDom; FULL 1.
SMART; SM00126; IL6; 1.
PROSITE; PS00254; INTERLEUKIN 6; 1.
PROSITE; PS00254; Growth factor; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EM the European Bioinformatics Institute. There are no restruse by non-profit institutions as long as its content
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE=92195319; PubMed=1549124;
Sterneck E., Blattner C., Graf T., Leutz A.;
"Structure of the chicken myelomonocytic growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDIJINE=89231616; PubMed=2785450;
Leutz A., Damm K., Sterneck E., Kowenz E., Ness S., Frank R.,
Gausepohl H., Pan Y.-C.E., Smart J., Hayman M., Graf T.;
"Molecular cloning of the chicken myelomonocytic growth factor (cMGF)
reveals relationship to interleukin 6 and granulocyte colony
stimulating factor.";
stimulating factor.";
EMBO J. 8:175-181(1989).
                                                                                                                                                                                                                                                                                                                                                                                Glycoprotein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     ProDom; PD008388; GCSF_MGF; 1.
ProDom; PD004356; Interleukin_6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRINTS; PR00433; IL6GCSFMGF.
PRINTS; PR00434; INTERLEUKIN6.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa;
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                    132
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                                                                                          72
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                                                                                                                                                                                                  67;
                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     kinases.";
ll. Biol. 12:1728-1735(1992).
QPTQ--GAMPAFASAFQRRAGGVLVASHLQSFLEVSYRVLRHLAQ
                                                      AEVCFTQIRAGLHAYHDSLGAVLRLLPNHTTLVETLQLDAANLSSNIQQQMEDLGLDTVT
                                                                                                                                                   QSFLLKCLEQVRKIQGDGAALQEKLCATYKLCHPEELVLLGHSLGIPWAPLSSCPSQALQ
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                                                                                        LAGCLSQLHSGLFLYQGLLQALEGISPELGPTLDTLQLDVADFATTIWQQMEELGMAPAL 131
                                                                                                                          QLFLHKNLEFTRKIRGDVÄALQRAVCDTFQLCTEEELQLVQPDPHLVQAPLDQCHKRGFQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IPR009079; 4 helix cytokine
IPR003629; GCSF MGF.
IPR003573; IL6 MGF GCSF.
IPR003574; Interleukin_6.
                                                                                                                                                                                                                                                                     123
137
201
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61
89
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Neognathae; Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                                                                                     33.7%;
40.6%;
                                                                                                                                                                                                                                                                          MW;
                                                                                                                                                                                                  28;
                                                                                                                                                                                                                                                                      Myelomonocytic growth factor.
By similarity.
By similarity.
N-linked (GlcNAc. . .) (Potent.
N-linked (GlcNAc. . .) (Potent.
N-linked (GlcNAc . . .) (Potent.
                                                                                                                                                                                                                     Score 304; DB 1
Pred. No. 1e-19;
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tion of
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ic growth factor gene avian myelomonocytic
                                                                                                                                                                                                                                      DB 1;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Usage
                                                                                                                                                                                                    68;
                                                                                                                                                                                                                                    Length 201;
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Best Local Similarity
Matches 46; Conserv
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SEQUENCE
                                                                                                                                                                                                                                                 Signal.
SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                invasion by Salmonella typhimuriu
Salmonella gallinarum.";
Microbiology 146:3217-3226(2000).
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Eukaryota; Metazoa; Cnoruurr
Eukaryota; Metazoa; Neognathae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gallus gallus (Chicken).
Fiikarvota: Metazoa; Chordata;
                                                                                                                                                                                                                                                                                    ProDom; PD004356; Interleukin_6; 1.
SMART; SM00126; IL6; 1.
                                                                                                                                                                                                                                                                                                                     PRINTS; PR00433; IL6GCSFMGF.
PRINTS; PR00434; INTERLEUKIN6.
                                                                                                                                                                                                                                                                                                                                                     GO; GO:0005576; C:extracellular; IEA.
GO; GO:0005125; F:cytckine activity; IEA.
GO; GO:0005138; F:intexleukin-6 receptor
GO; GO:0006955; P:immune response; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                     Submitted (JAN-2003) to the EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Differential cytokine expression in
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                                                                                                                                                                                                                                                                                                                                                                                                     P05231;
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AJ250838; CAC15566.2;
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                                                                                       NSMEMLVRNNLNLP----KVTEEDGCLLAGFDEEKCLTKLSSGLFAFQTYLEFIQETFDS
                                                                                                                                                           LGPASSLP-----
 IBKITMHLILRDFTSFMEKTVRAVRYL
                                                                                                             PEELVILIGHSLGIPWAPLSSCPSQALQLAG-----CLSQLHSGLFLYQGLLQALEGISPE 99
                                                                                                                                    LPPAAAVPLPAAADSSGEVGLEEEAGARRALLDCEPLARVLRDRAVQLQDEMCKKFTVCE
                 ---VASHL-----QSFLEVSYRVLRHL 172
                                                                LGPTLDTLQLDVADFATTIWQQMEELGMAPALQPTQGAMPAFASAFQRRAGGVL-----
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                                          EKONVESLCYSTKHLAATIROMV-----INPDEVVIP--DSAAOKSLLANLKSDKDW
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26790 MW;
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the EMBL/GenBank/DDBJ databases
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19,
27,
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                                                                                                                                                                              Score 111; DB 2; Le
Pred. No. 0.055;
Pred. No. 74;
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                                                                                                                                                                                                                                        mature ChIL-6
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                                                                                                                                                                                                                                                                                                                                                                                                                                      databases
                                                                                                                                                                                                      Length 241;
                                                                                                                                                                                 Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Burnside
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                                                                                                                                                                                 52;
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44

100

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RESULT 15
Q9XT80
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Q8MJ75
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Best Local
                SEQUENCE FROM N.A.

MEDLINE-20141864; PubMed=10678396; DOI=10.1016/S0165-2427(99)00150-6;

MEDLINE-20141864; PubMed=10678396; DOI=10.1016/S0165-2427(99)00150-6;

St-Laurent G., Archambault D.;

"Molecular cloning, phylogenetic analysis and expression of beluga whale (Delphinapterus leucas) interleukin 6.";

whale (Delphinapterus leucas) interleukin 6.";

Vet. Immunol. Immunopathol. 73:31-44(2000).

EMBL; AR076643; AAD42929.1; -.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q8MJ75;
01-OCT-2002
01-OCT-2002
                                                                                                                                                                                                                                                                                                                                                               01-NOV-1999 (TrEMBLrel.
01-NOV-1999 (TrEMBLrel.
01-MAR-2004 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRINTS; PRO0433; ILGCCSFMGF.
PRINTS; PRO0434; INTERLEUKIN6.
PRODOM; PD004356; Interleukin_6; 1.
PROSITE; PRO0254; INTERLEUKIN_6; 1.
PROSITE; PS00254; INTERLEUKIN_6; 1.
                                                                                                                                                                                                                                          Delphinapterus leucas (Beluga whale).
Bükaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Butheria; Cetartiodactyla; Cetacea; Odontoceti;
Monodontidae; Delphinapterus.
                                                                                                                                                                                                                                                                                                                                                                                                               Q9XT80;
01-NOV-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q9XT80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL; AF518322; AAM74938.1;
HSSP; P05231; 1ALU.
GO; GO:0005576; C:extracell
                                                                                                                                                                                                                         NCBI_TaxID=9749;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Lee D., Yoo H., Choi
Submitted (JUN-2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q8MJ75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 InterPro;
InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=9823;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sus scrofa
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                                                                                                                                                                                                                                                                                                                                                 nterleukin 6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             nterPro;
  GO:0005576;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9; P05231; IALU.
GO:0005576; C:extracellular; IEA.
GO:0005125; F:cytokine activity; IEA.
GO:0005138; F:interleukin-6 receptor
GO:0005138; F:interleukin-6 response; IEA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             172 NAGLIDKLQSQNEWMKNTKIILILRSLEDFLQFSLRAIR 210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pro; IPR003573; IL6_MGF_GCSF.
Pro; IPR003574; Interleukin_6.
PF00489; IL6; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   52
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             37;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LMRITTGLVEFQIYLDYLQKEYESNKGNVEAVQISTKALIQTLRQKGKNPDKATTPNPTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LSQLHSGLFLYQGLLQALEGISPELGPTLDTLQLDVADFATTIWQQMEELGMAPALQPT-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KTEELIKYILGKISAMREEMCEKYEKCENSKEVLAENNLNLPKMAEKDGCFQSGFNQETC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KCTEGAKKIÓGDGYATÓEKTCALAKTCHEBETATTGHRIGIE-MYETSCESÖYTÖTYGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -QGAMPAFAS--AFQRRAGGVLVASHLQSFLEVSYRVLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IPR009079;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (TrEMBLrel.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AA;
C:extracellular; IEA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 12.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    23881 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Cetartiodactyla;
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to the EMBL/GenBank/DDBJ
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IL6_MGF_GCSF.
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12,
26,
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26,
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                                                                                                                                                                                                                                                                                                                                                                    Last
Last
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Pred. No. 0.05
32; Mismatches
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Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                 Created)
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                                                                                                                                                                                                                                                                                                                                                               sequence update)
annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                            208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Suina; Suidae;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           85;
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Best Local S
Matches 33
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PRINTS; PR00434; INTERLEUKIN6.
PRODOM; PD004356; Interleukin_6; 1.
SMART; SM00126; IL6; 1.
                                                                                                                                                                                                                                   SEQUENCE
                                                                                                                                                                                                                                                                                                                                        InterPro; IPR003573;
InterPro; IPR003574;
                                                                                                                                                                                                                                                                                                                                                                                 888
                                                                                                                                                                                                                                  PROSITE; PS00254; INTERLEUKIN 6; 1.
SEQUENCE 208 AA; 23456 MW; 81CC
                                                                                                                                                                                                                                                                                                                          Pfam; PF00489; IL6;
                                                                                                                                                                                                                                                                                                                                                                    InterPro;
                                                                                                                                                                                                                                                                                                                                                                             GO:0005125; F:cytokine activity GO:0005138; F:interleukin-6 rec GO:0006955; P:immune response;
                           138 --MPAFASAFQRRAGGVLVASHLQSFLEVSYRVLR 170
                                                         112 TGLLEYQIYLDYLQNEYEGDKGSIEAVQISIKALAQILRQKVKNPDEVTTPDPTTNASLM
                                                                                                                 52
                                                                                     18
                                                                                                                                          22 VRKIQGDGAALQEKLCATYKLCHPEELVLLGHSLGIP-WAPLSSCPSQALQLAGCLSQLH
                                                                                                                                                                                       Similarity
NNLQSQNDDWMRNTKIILILRSLENFLQFSLRAVR
                                                                                     SGLFLYQGLLQALEGISPELGPTLDTLQLDVADFATTIWQQMEELGMAPALQPTQGA---
                                                                                                                 IKYILGKISAMRKEMCEKYDKCENSKEALAENNLNLPKMAEKDGCFQSGFNQETCLMRIT
                                                                                                                                                                                                                                                                                                                                                                    IPR009079; 4
                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                               F:cytokine activity; IEA.
                                                                                                                                                                                       12.0%; Score 108; DB 2; 21.3%; Pred. No. 0.088;
                                                                                                                                                                                                                                                                                                                                                    IL6_MGF_GCSF.
                                                                                                                                                                           35;
                                                                                                                                                                                                                                                                                                                                                                    _cytokine.
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                                                                                                                                                                                                                                                                                                                                                                                                 receptor
                                                                                                                                                                                                                                                                                                                                                                                     IEA.
                                                                                                                                                                                                                                                                                                                                                                                                   binding;
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18
                                                                                                                                                                                                     Length 208
                                                                                                                                                                                                                                                                                                                                                                                                   IEA.
                                                                                                                                                                           Indels
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Search completed: July 9, 2005, 12:53:58
Job time: 111.819 secs

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